

Fort Wayne Bonsai Club Newsletter

Vol. 11 Issue 7

July 21, 2007

July Bonsai Club Meeting Annual Picnic & Auction

The next meeting will be Saturday, July 21st at the home of Kathy Lee for our annual picnic. See Kathy's Korner for directions. I thank Kathy for having it this year since our house is tore up. Our barn is finished and has nearly doubled in size and looks great I might add! But, we are currently living with our offices jammed into our living room and only have a half bath downstairs. The construction on the house will begin on Monday, the 16th (we hope) and take 2-3 months to finish. Next year we can bring the picnic back here unless someone else would like to volunteer.

I was afraid that Jerry and I both were going to have to miss this year's picnic because it is during the 4-H fair and the day the VFW serves Beef and Noodles at the fair. Fortunately we serve those for dinner so I will be at the picnic and auction until 3:00 pm then I have to leave to go cook noodles. Unfortunately Jerry will have to miss the picnic entirely but he wishes he could be there and hopefully next year we will not have this conflict. Summer is just too busy. Don't forget to call Kathy with what you are bringing to the picnic. If you want to make a hypertufa trough don't forget your mold and your \$5.00. And please, don't forget to help Kathy clean up when it is all over, I have to leave early to cook noodles so I can't stay to help and I now Kathy would appreciate some help getting things "back to normal"!

Kathy's Korner

O.K. Big event! For any one that is new to the club. This is generally a chance to get pre-bonsai (or bonsai that have fallen out of favor with their owner) for really great prices. Most of the stuff that we auction is bonsai or related, but other things sort of sneak in there too. Rod has brought a bunch of pots, a few books, and some miscellaneous gardening stuff. He doesn't want to take any of it home.

As I mentioned last month, I have lots of space, plenty of shade. I haven't had any more rain than any of you so the grass is mostly brown. But, the good side of that is there are NO mosquitoes! We could have horseflies though. They are generally around in July, even though I have no horses. I do have two cats. Patches will probably be a

pest. I can't do anything about that. She is very sociable and I love her.

Also as I mentioned last month, I don't have a lot of tables. We will probably need 3 or 4, 6 to 8 foot tables to serve as buffet and for eating at. If we have plenty, one could be used to place the plants on that you all are bringing to sell and hopefully someone will buy. Bring your own chair. I have 4 or 5 but that won't be nearly enough. Unless you want to bring a blanket and pretend you are on a picnic.

Jerry won't be doing his Master Chef grilling this time. The club will provide Chicken from Scott's or some such place and a big roaster pan of barbeque with buns to go with. You all are to bring a dish to share. I'd like you to call me (637-6242) or e-mail me (igarden2@aol.com) to let me know what you are going to bring. That is just so we don't get 5 baked beans 7 potato salads and 13 chocolate cakes. Those are all good eats, but don't offer much variety. Let me know if you can bring a table too.

My address is 4931 Ranch Road. MapQuest does a good job of giving directions, but if you don't use it here is another option. I live approximately 3.5 miles north of the Dupont, Tonkel, Clinton, Hwy 1 intersection. There is a lot of congestion there, because of the construction. If you are coming north on Clinton, do NOT go directly straight through that intersection. You will end up in Leo. Veer a bit to your left so that you pass the Mobile gas station on your right and pass through the intersection with a traffic light. Walgreen's will be on your left and Grabill bank on your right.

If you are coming to Dupont off of 69, take exit 16, turn east on Dupont and proceed to the above mentioned intersection. Turn left or north. Now everyone should be on the same road. (Tonkel Road) Go north on Tonkel for approximately 3 and a half miles. Going north you will pass the Union Chapel intersection which has a traffic light. The next one will be Hursh Road. (no light) Then down the hill, across the bridge, up the hill and Hosler is on your right. Also on the right is the volunteer fire station. The next road that you come to is a T-road. The name is Ranch Road. There are entrance walls with Cedar Canyon on them. Turn left onto that road. I am the 4th house on the right. You will pass a bunch of wooded area before you pass the first house. Then count 2 more, then see the pond on an otherwise empty lot. My house is the milk chocolate ranch after the pond lot. Two beige vans sitting along the driveway.

If you still need directions, call me.
Kathy Lee

ROD'S PREMIER ESTATE LIQUIDATION

It's half over! Our path to becoming snow birds is moving.....and moving.....and downsizing! We are out of our 2700 sq ft home on our way to 1480 2 br villa in Sun City Center, FL. We are holed up at the family cottage with boxes and boxes of stuff we evacuated before United Van Lines came July 9 and 10 to move us into storage until we get the villa in mid October. Large piles went to Cherished Again, Goodwill, St. Vincents, friends, relatives, here at Tippy, AND TO KATHY LEE'S, the sight of the 2007 Bonsai Picnic!

You will have a chance to add to your bonsai pots, with 22 for auction. Those not meeting minimum bid will be donated to Foellinger-Freimann Conservatory. Other items will include a broad range of garden supplies.....soaker hoses, organic fertilizer, tools, sprinklers, and even some Wall-O=Waters. Our villa yard is restricted use and has its own sprinkler system. I have, however, allowed limited tools to be packed in the hopes that I will eventually win a community garden plot where I can grow fresh kitchen garden produce all winter long under sunny skies in zone 9. Then we progress to their delightful assisted living, then nursing, then shipped back in a trash can to be buried in Lindenwood.

A great big thank you to Kathy Lee for allowing me to deposit my auction stuff in her drive so that I didn't have to move it twice.

Bring cash and bids. This might be a longer than normal auction,

I will maintain membership and attempt to keep my eight remaining trees alive during Oct-May buried in the woods behind the cottage. God will have to provide water. The wind chills on this hill get ridiculous. But we'll be on our lanai in the Sunshine State half way between Tampa and Sarasota in our little villa, with the dog park a block and half away.

Rod, Kathy, and Sugar Plum Fairies

2006 Calendar of Local or Nearby Events

July 21, 2007 11:00 am Club picnic and Auction at Kathy Lee's home Carry in picnic with Club supplying meat.

August: Summer Vacation Have fun and take care of your trees.

September 15, 2007 Meeting (Trip to Gee Farms nursery for more bargains ?? We'll take a vote on this.)

October 20, 2007 9:00 am setup Bonsai Show and Club meeting at Foellinger Freimann Botanical Conservatory

November 17, 2007 10:30 am meeting

December 15' 2007 11:30 am Christmas Luncheon
Location to be determined.

The club has the following items for sale:

Wire assortments: club members \$40.00, subscribers \$42.00, non-members \$45.00

Micromax micro-nutrients: \$5.00 for members, subscribers \$6.00, non-members \$7.00

Bonsai soil, shopping bag of 2 scoops: \$5.00 for members, subscribers \$6.00, non-members \$7.00

New Fertilizer blocks. ½ lb bag \$2.50 for members, Subscribers \$3.00, non-members \$3.50 1 lb bag \$5.00 for members, Subscribers \$5.50, non-members \$6.00

We also have bonsai slabs for forest plantings. Prices range from \$25.00 to \$50.00. Call Darlene or Ed regarding purchase.

All these products are great buys and priced lower than retail if they are even available in this area. Call or email Darlene or Ed if you want products brought to this meeting.

May Minutes

The June meeting was held at the Japanese Garden and was a workday. Darlene Kittle held a brief meeting to discuss the menu for the July 21 picnic. Members were asked to bring coolers if their food items needed to be kept cold. Members should also bring chairs if possible. The work at the gardens included weeding and pruning some bushes and trees. Jerry Kittle was pruning some dead wood out of one of the trees when the branch the ladder was braced on gave way. He was saved from a nasty fall by John Kirkwood and Bruce Kennedy.

Respectfully Submitted,
Barbara Kirkwood

RAIN WATER—A NITROGEN EFFECT??

QUESTION: I have noticed that my trees do much better after rainfall. I've been told that it is the nitrogen releasing quality of the rainwater which makes them seem to green up after a nice rain. You mention oxygenation. Does anyone know any more about this?

Alan Walker, Lake Charles, LA, USA

ANSWERS:

In thunderstorms nitric oxides are formed. When dissolved in the rain the oxides become a source of nitrate. Other gases dissolved in rain are carbon dioxide, nitrogen and oxygen. In areas with air pollution, sulfur oxides dissolved in the rain to produce acid rain.

Rain water could range from being slightly acidic to very acidic. In my area rain water is better than my city water, anytime. Somehow, rain water seem to possess some almost magic-like properties that makes my bonsai grow better.

Regards, *Ernie Kuo* erniekuo@AOL.COM

<http://members.aol.com/erniekuo/bonsai.html>

One of the things that makes a big difference after a rainfall is that the salts that build up on the leaves from ground-water are dissolved by the rainwater. Here is where acid rain really shines. It is better at dissolving these salts than pure rain. If salts have built up in the soil, they too are flushed out. The little nitrogen dissolved in acid rain won't make any difference to a plant that is regularly fertilized.

Brent Walston, Evergreen Gardenworks

bonsai@EvergreenGardenworks.com

<http://www.EvergreenGardenworks.com>

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Our atmosphere is about 80% N₂ and lightning amounts to about 2 to 10 pounds per acre a year. Symbiotic (Rhizobia) micro-organisms may contribute between 50 and 530 pounds per acre per year. All nitrogen used by plants is fixed from the atmosphere and eventually returned back to the atmosphere much like our water cycle. Organic nitrogen in the soil (95% of nitrogen in surface soil is in organic compounds)



WHAT TO DO IN JULY

By Ed Hake

When it is hot, like it is now, we must check our trees often. In the morning, before you go to work. If any look dry give them a watering. Check again when you come home in the afternoon. The roots are filling the pot and the trees will dry out faster and faster as they use more water when the days are longer and hot and of course because our lack of rain. Fertilize regularly, if you are not using our fertilizer blocks. I find, I am still pinching the growth on my elms and junipers and other trees that are putting out new growth rapidly. Try not to have to water during the hottest part of the day, unless absolutely necessary. **Most importantly** find a shady spot (for yourself), a big glass of iced tea to just sit and enjoy watching the beauty of your trees and nature all around us.

Ed

must be mineralized by micro-organisms or it can not be used by plants.

The C/N ratio is an important factor, if you are concerned about the composting effect reducing available nitrogen to the plant. Slow release nitrogen will have some nitrogen available for plant use as well as composting and there are many available forms out in the market today; IBDU-has a low salt index, SCU, Urea formaldehyde, plastic coated Osmocote® and natural organics. Liquid fertilizers frequently applied will also have nitrogen available for plant use besides composting.

Large commercial tree nurseries use composted bark (fir-hemlock) in their container or field grown trees. They do not use uncomposted organic material, and their purpose is to sell a product within five years of growth. They apply slow release nitrogen fertilizers annually to cut down on labour costs.

Anton Nijhuis, Vancouver Island

ibonsai@OBERON.ARK.COM

I'll throw one more theory into the equation, temperature. At least here, when this rush of growth is most noticeable is after a cooling rainfall during otherwise hot seasons. I'm guessing that in addition to the other theories expressed on the topic, the rainwater lowers the soil temperature to a more acceptable level for root growth.

Rick Choate, S-most, TX RickBonsai@aol.com

Bonsai Styles- The Complete Practical

Encyclopedia of Bonsai by Ken Norman

Triple Trunk – SAMBON-YOSE

Multiple plantings should consist of three, five, and seven and so on as a well balanced group is difficult to achieve with even numbers except two. Here, we will be looking at the approach to a triple-trunk planning that can often be seen growing naturally in the wild.

Any species of tree may be used to create this style of bonsai, but you will discover that it is largely conifers that have this type of growth formation. The plant material that you choose will need to include three plants with trunks of varying



thicknesses, as well as of different heights. However, bear in mind that the heights of the trunks can be altered easily by pruning. Trees that have one-sided root systems would also be highly suitable because the bases of the trunks will need to be placed very closely together to create a satisfactory final design.

Group or Forest – YOSE-UYE



This style of bonsai planting is intended to create the appearance of a copse, spinney, small wood or even a large forest, only in miniature. A group or forest can be created using anything from five to fifty or more trees; in fact, you can use as many trees as can be satisfactorily handled. The only stipulation is that there should be an odd number of trees in order to lend a more balanced appearance

to the final design. Your aim should be to create a group that gives the viewer the feeling of being within a wooded area, while being aware that it will be viewed from the outside. It may take several plantings to achieve this effect. Most types of plant are suitable, but, by keeping to the same species and variety for each group, you will achieve a more natural appearance.

Submitted by Barb Kirkwood

The Bonsai Traveler

Bonsai News from Cat Nelson

I have recently returned from my first American Bonsai Society Learning Seminar. This year the seminar was held in Virginia Beach, VA, at the Cavalier Hotel - the first hotel on the beach that established the area as a vacation hot spot. The seminar was a 4 day event, starting with the Joshua Roth New Talent competition on Thursday and ending with a final raffle Sunday at noon.

It was a very interesting experience, and worth the trip out. I did not see the Joshua Roth competition, but our region was well represented by Eric

Newton, President of the Bonsai Society of Kalamazoo, who won second place with his design. The Joshua Roth is a competition for new bonsai artists who have been in the hobby for less than ten years. Submissions are sent to ABS, with photos of sample trees styled by that entrant, and those are gone through for the top 10 entries. The finalists are all given a similar tree to style, and they have 8 hours to work in. The trees are then set out on display for judging, and the winners are announced at the banquet on Sat. night.

The Seminar itself is a series of half day or whole day classes that run for two days. If there was anything that I would complain about, it was the fact that there were too many classes that I wanted to take, but you are limited in the number you can participate in. Registration included all 4 sessions - Fri. morning, Fri. afternoon, Sat. morning and Sat. afternoon, but there were around half a dozen choices of topic for each time slot. I chose to take 4 different half-day courses, which mainly consisted of lecture-type environments with the exception of the bring-your-own-deciduous class. The whole day courses were generally set up as lecture in the morning and then workshop in the afternoon. Every thing was discussed from azalea care, to proper shohin display techniques; tropicals, deciduous and conifers all had their own sessions; and there was talk of trees everywhere.

The Seminar moves around the country every year, generally on the fourth weekend in June. Next year it will be in San Antonio, TX, and the following year (2009) it will be in Boise, ID. In addition to the classes, there are displays of local trees and a vendor area. I found the regional trees to be very

interesting, to see what folks are doing with their local growing conditions and regional flora. The vendor area was also nice, I saw several vendors whom I have not seen at any of our regional shows.

I do not have pictures developed from this trip yet, but I will include some photos of the trees in the Chicago collection for visual interest. The next two shows of local interest coming up are Four Season's show in Detroit on July 28 & 29, and the Chicago show Aug. 17-19. I hope to see folks in Chicago!

Chicago Bonsai Trees



Ginkgo



Juniper Forest



Pine

Bonsai and Lime Sulphur

Over the years I have seen, heard and read so many myths about Lime Sulphur (sometimes spelled as Lime Sulfur). Why there is so much invention, misinformation and almost mystique surrounding this chemical I am not sure, but it seems to stem from less-informed bonsai literature of yesteryear.

What is Lime Sulphur? Lime Sulphur is a foul-smelling liquid that bonsai enthusiasts brush onto deadwood in order to produce a distinctive white color. It does not paint a coat of color onto the wood, but rather as the lime sulphur dries, it 'bleaches' or 'stains' the wood with a white, chalky color.

Lime Sulphur was originally developed as a winter wash (fungicide and insecticide) and used to spray trees during the Winter to kill any residual moulds, fungi and overwintering insects or eggs. It was first developed during the mid 19th century to control mildews on grapevines in French vineyards. From the early 1900's to the 1940's, lime sulphur was used widely and produced on a commercial basis until it was superseded by newer, more efficient chemicals.

How does Lime Sulphur stain the wood of a tree? The Lime Sulphur mixture produces a certain amount of *Sulphur dioxide* (SO₂) as it dries (dependent on the ambient temperature, the warmer Lime Sulphur solution is as it dries, the greater the volume of Sulphur Dioxide that is produced). Sulphur dioxide is a known preservative still used in the wine-making and dried-fruits industries where it is used for its ability to kill microbes and bacteria.

Sulphur dioxide is also known as a reductant; that is, in the presence of water, it is able to remove the colors of permeable materials that it comes into contact with (Sulphur dioxide is still used in some industries to bleach paper and delicate fabrics such as clothes).

The bleaching effect of Sulphur dioxide is not permanent however, after exposure to oxygen (in the air), the bleached material is slowly oxidised and the natural, original color or pigment of the stained material returns.

This is one of the reasons why Lime Sulphur must be repeatedly applied to the deadwood of bonsai to ensure it stays white.

Lime-sulphur isn't a pleasant liquid. Without doubt it should be treated with respect. Wear gloves when applying it. Store it out of reach of children. Wear a face mask if you use it as a spray. If you swallow any solution or get any in your eyes, seek medical assistance.

Where do you obtain Lime Sulphur?

Lime sulphur is virtually impossible to obtain at general horticultural outlets as it has long been superseded by other insecticides, fungicides and winter washes. These days, the only place you will find Lime Sulphur liquid is at Bonsai nurseries or online through Bonsai mail order companies. It is a relatively cheap product and a small bottle will last a long time.

I have only ever seen one authoritative guide to producing your own Lime Sulphur that involves boiling calcium hydroxide and sulphur and allowing it to simmer for a few hours. Given the cost of obtaining the ingredients, the danger of this process and the fact that it is *extremely* smelly, it is *not* worth trying to produce your own lime sulphur!

Materials Required for applying Lime Sulphur to Bonsai Deadwood

Together with your lime-sulphur, you will require a separate dish. Pour a small amount of the lime-sulphur solution into the dish or container. Do not apply the lime sulphur directly from the bottle as it will spoil the mixture.

You need to use a covered or old surface to work on as the lime sulphur can splash and flick as you apply it to the deadwood. The lime sulphur will stain almost anything that it comes into contact with.

You must work outside. Lime sulphur is very pungent until it dries, do not apply it indoors!

Use a paintbrush to apply the lime sulphur to the deadwood. The exact size of brush you require will depend on the size and intricacy of the deadwood but generally an old paintbrush of 1cm or less is

required. It is worth finding some old artist's paintbrushes if possible; I find that the bristles of cheap brushes tend to disintegrate quickly with the combined effects of the rough deadwood surface and the effect of the lime sulphur on the glue used to attach the bristles. Otherwise you can spend a lot of time carefully removing bristles from the deadwood!

The brush can be cleaned with soapy water if done so immediately after use. However, if allowed to dry, the lime sulphur will render the brush unusable.

Lastly, have some absorbent paper cloth (kitchen roll/tissue) at hand to absorb spills and excess Lime sulphur on the deadwood.

A Practical Guide to Applying Lime Sulphur to Bonsai to Whiten Deadwood

Lime-sulphur isn't a pleasant liquid. Without doubt it should be treated with respect. Wear gloves when applying it. Store it out of reach of children. Wear a face mask if you use it as a spray. If you swallow any solution or get any in your eyes, seek medical assistance.



This is a Juniper trunk that has recently had its bark removed to create a *shari*. The live vein of growth is on the right hand side of the trunk and its edge has been sealed with wound sealant for the purposes of helping the edge of the live wood heal. It is **not** necessary to protect the live wood, bark or cambium (even when green) against the lime sulphur. The tree will **not** be damaged even if the live green cambium layer is exposed to lime sulphur.

It does **not** matter whether the deadwood is fresh and has just been created (from live wood) or has been 'allowed to dry for a while'. You will find that new deadwood is slightly sappy and the lime sulphur will not take quite as well as when the deadwood is older, but again, it is not necessary to wait after creating deadwood before applying lime sulphur.



If lime sulphur is painted onto dry wood it tends to run off the wood rather than be absorbed *into* the wood. Lime sulphur is also unable to penetrate as deeply when the wood is dry. For the lime sulphur to have any preserving effect on the wood (however slight) it must be absorbed as deeply as possible; by ensuring that the wood is damp, the lime sulphur is able to penetrate much better.

Secondly, as mentioned previously, moisture (water) is necessary for the Sulphur dioxide to have a bleaching or staining effect. Dry wood takes much longer to whiten and in some cases can retain some of the original yellow/red color of the lime sulphur mixture.

If the wood is not already wet from being outside in rainy weather, spray it thoroughly with water.



Any excess water on the surface of the wood will cause the lime sulphur to run down the wood and bleach areas of the tree that you do not require to be whitened. Use an absorbent cloth to remove *excess* water from the deadwood itself and try to dry the bark as much as possible.



Apply the lime sulphur, starting at the highest point of the deadwood. It is better to apply several thin coats over the course of a few hours than try to apply a thick coat all at once. Any excess lime sulphur will run down the deadwood. Be prepared to mop up any excess lime sulphur that collects at the base of the deadwood you are painting.

It is necessary to mop up the excess lime sulphur before it runs into the soil or surrounding areas of live wood and bark. This is because the lime sulphur will also bleach the soil and the bark. It is **not** because the lime sulphur will 'kill' the tree or 'damage the roots' of the tree.

Obviously, a large amount of lime-sulphur in the soil is not a good thing for the health of the tree but this must be kept in perspective. A small amount of run-off will **not** poison the tree. On many occasions I have lime sulphured deadwood roots (as shown in these images) and lime sulphur has run into the soil with absolutely no detriment to the health of the tree. If you worried that too much lime sulphur has entered the soil, simply flush the lime sulphur out with water.



If any lime sulphur gets onto the bark of the tree, as can be seen on the base of the tree in the above image, simply use some **wet** cloth to wipe away the excess lime sulphur.



Do this as soon as possible so the lime sulphur does not have a chance of whitening the bark. If the bark still appears white when the lime sulphur has dried, just use an old toothbrush or similar to clean the bark.



The lime sulphur will dry and whiten the wood over the course of the next hours or days depending on how moist the wood is (the more moisture, the quicker the whitening takes effect) and the ambient temperature (the warmer the weather, the faster the lime sulphur will dry). Avoid placing the tree where the lime sulphur will be exposed to rain as this will cause the lime sulphur to run off the deadwood before it has had the necessary bleaching effect.

The newly lime sulphured deadwood of the tree above is shown just hours after the lime sulphur was applied. As can be seen, the wood is not as white as can be achieved and this is normal for a first application of lime sulphur on freshly stripped deadwood. Additional applications will ensure that the wood takes on a much more even stark-white finish that contrasts well with the adjoining live wood and bark.

Coloring Lime Sulphur

By its nature, Lime Sulphur produces a white finish to deadwood. While a stark white color is suitable for coniferous species such as pine and juniper, on other tree species such as boxwood, hawthorn, privet and

the majority of deciduous and broadleaf trees, lime sulphur is often colored to produce a more appropriate variety of tones and colors.

Additionally, because lime sulphur produces such a flat white color with no tone or variety, it can make deadwood look very flat and 2 dimensional. Being able to darken and color lime sulphur allows the artist to produce an appearance of depth and a third dimension to lime sulphured wood.



The hollow trunk of this Thuja was lime sulphured but rather than allow the lime sulphur to produce uniform white finish, the lime sulphur was carefully tinted with black ink to produce a variety of greys and black to increase the feeling of depth in the finish.

The outer edges of this trunk were painted with pure lime sulphur and then as I painted deeper and deeper into the hollow, I added a few drops of black ink to the lime-sulphur mixture to produce a steadily darker color.

Lime sulphur can be coloured with a variety of ingredients and some experimentation is required. All water-based inks and paints will work well but avoid using anything oil-based as it will not mix with the lime-sulphur. Generally only a very small amount of black ink or paint is required for the finish to become a grey colour. For a more natural 'wood' color, try ochres or burnt umber paints.

For a more 'natural' approach to coloring, you can use diluted (in boiling water) tea leaves, instant coffee granules or grinds to produce softened white to ochre tones. For grey tones you can use wood or cigarette ash either mixed into the lime sulphur or applied to the wood after the lime sulphur has dried.

Due to the nature of lime sulphur, it is not possible to advise of exact mixtures or recipes and experimentation is necessary. Always allow the lime sulphur to dry to its 'final' color before judging the results of your work!

Using Lime Sulphur as a Winter Wash for Bonsai

Lime Sulphur still has its uses as a winter wash for (outdoor) bonsai. Mix Lime Sulphur with water at a rate of *approx* 1:25 to 1:50 and spray over the trunk and bare branches to kill any overwintering insects, bacteria or fungi. Rinse off the soil surface and bonsai pot with water afterwards to remove any temporary staining that the diluted lime sulphur may cause (This is purely for aesthetic reasons!). I use a lime sulphur winter wash only on my deciduous trees however I understand that some enthusiasts also spray their coniferous evergreens; the needles may however have a temporary white color that disappears by Spring.

A lower rate of dilution (*approx* 1:25) with water is useful for cleaning and brightening the trunk of trees with smooth bark such as Hornbeams, Beech and Chinese Elms. Simply spray the solution onto the bark, allow to dry and the bark becomes a subtly lighter and brighter color. Again, for aesthetic reasons rinse away any excess solution that lands on the soil surface or the pot.

Lime Sulphur as a Bird Deterrent

As with many enthusiasts, I have great problems with birds (in particular blackbirds) in late Winter and early Spring using the soil surface of my trees as a dust bath and making a mess while foraging for food.

By accident I have found that spraying my trees with a diluted lime sulphur winter wash is an excellent way of reducing the attraction of my bonsai to birds. Birds have a good sense of smell too! I have since found

that if the lime sulphur solution is sprayed as soon as the first birds come to feed in and around your bonsai in Winter, they immediately 'learn' that your bonsai do not smell appetizing and will not return to feed or take a bath for the remainder of Winter and Spring.

And please, before I receive e-mails condemning this advice, the smell of the lime sulphur dissuades any feeding long before a bird would consider ingesting it.

Finally. Does Lime Sulphur Actually Preserve Deadwood?

Yes and No.

Lime Sulphur kills all (or at least most) bacteria that cause the breakdown and deterioration of wood that we know as 'rot'. It also produces a temporarily hostile environment against bacteria. However, the anti-bacterial or anti-fungal effect of the lime sulphur is relatively short-lived in comparison to its bleaching effect. Most enthusiasts will have seen lime-sulphured wood begin to turn green and support bacteria within a relatively short period of time.

This short term protection requires that the lime sulphur be applied on an annual or even 6 monthly basis to ensure that all of the wood remains stark white (*if* this is required) and to keep the majority of bacteria and fungi at bay.

Not only is the anti-bacterial effect of the lime sulphur relatively short-lived, but it only has an effect on the parts of the deadwood that it is able to access. As has already been discussed, lime sulphur is only able to permeate the wood of a tree to a certain depth (depending on the density and condition of the deadwood). Whilst lime sulphur is able to kill bacteria on the surface of the wood and possibly to a depth of a few millimetres on a soft wood), the underlying layers of wood will remain unprotected.

If bacteria is able to access the underlying layers of wood that the lime sulphur cannot (for instance through fissures or breaks in the integrity of the wood or through deadwood exposed only to the soil), rotting will continue unabated.

In summary; lime sulphur cannot and should **not** be regarded as a preservative that will protect deadwood from rotting or breaking down. While it is able to preserve shallow or thin areas of deadwood for a period of time, it is not a reliable method of rot-prevention.

For the dense and hard wood of Yews, Junipers and Pines, lime sulphur is probably going to be sufficient as these woods are naturally resistant to rotting. On species with softer wood such as privet, bougainvillea and most deciduous species, a proper wood preserver or wood hardener must be used.