

IBA News & Muse
Iowa Bonsai Association Newsletter
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IBA NOVEMBER Activities

November 18, 2014, Tuesday, 7:00pm
The End of The Year IBA Banquette And Meeting
Des Moines Botanical Garden, Walsh Room

We will have a very brief meeting. *Awards* will be presented and an *Auction* will be held.

Fall Color Contest – bring a tree with fall color. It is permissible to glue or tape leaves on.

Bare Naked Tree Contest – bring a deciduous tree that has lost all its leaves.

Winners will be decided by popular vote. Prizes will be a \$10 credit to be used at the auction.

N.B.: This is our last meeting of 2014.

EIBA NOVEMBER Activities

November 13, 6 pm, Board Mtg. Nothing But Noodles Restaurant. *Topics include planning 2015 calendar, holiday party.*

November 20, 6 pm, EIBA Holiday Party. Meet at Carlos O'Kelly's in Marion.

Hola! Come join the club for a yearend Holiday Party in the Mexican style! Kick back with a margarita and rehash the year of bonsai. Also, bring your best ideas and suggestions for making the club even better. We love new ideas for club meeting topics. Make suggestions for workshops and other activities.

Spouses and family welcome. Just let Chris Burr know who is coming so he has a good headcount. Put on your party hat and we will see you there!

December 11, 6pm, EIBA Board Mtg. Meet at Nothing But Noodles.

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Topic: 2015 Calendar Finalization

January 11, 2015 2–4 pm “Art of Bonsai” by John Clemens
At Iowa City Public Library Meeting Room A



This Thalictrum (Meadow-rue) belongs to Wolfgang Putz.

Timely Tips

It's gotten cold out there. My deciduous trees are inside and I am cleaning them up. I remove loose leaves, clean weeds and fertilizer cakes and other detritus from the soil. I clean pots on sides and bottoms. I make any obviously helpful pruning cuts, but I save detail pruning for later in mid-November. Azaleas are in the garage along with boxwoods. Their leaves are still green and wanting light so I have them by a window.

My pines and junipers remain outside on the benches until hard frosts are here. By then, I plan to have all my deciduous trees on their winter racks. Then I will know how much room I have for pines and junipers in the garage. Once they come in, I will clean them up as well. Once the soil surface is clean I check to make sure how well water enters the soil. If it is packed soil I will punch a chopstick down into the soil to help water get to lower levels. I sometimes remove the beaten up top soil layer and add fresh soil to the surface.

I clean the surface bark of junipers knocking off loose bark with a soft brush. Then the tree is ready for pruning away extra foliage growing on the underside of branches and in branch crotches. With pines I wait until later in November then do pruning of any unneeded branches, followed by bud selection and needle reduction with tweezers. The challenge is to keep the tree in balance between weak and strong areas. Generally the apex and branch tips higher on the tree will be strongest, so you can pull a few more needles there, while leaving more needles in weaker areas.

Tropicals have been in the house for a while now. I give them as much light as possible. I pruned away some of the older foliage which has a tendency to drop sometimes anyway when the trees come inside. I spray for pests when they come inside and I have fertilized them once with 5-7-9. My tropical trees look good after a happy summer and nice fall. The trick is keeping them that way over the long winter.

I always spray my trees once they come into the garage for pests and fungus. Keep thermometers in your storage area. Water often enough, but let them dry out. It's a long winter, so make sure your trees are happy!

Korean Hornbeam Photos

By John Denny

Perhaps my favorite deciduous species is Korean hornbeam (*Carpinus turczaninowii*). It grows well and winters well in Iowa. It ramifies nicely, grows good nebari, can achieve good trunk girth with time, has beautiful leaves in summer and colors up wonderfully in fall.



Korean hornbeam (Carpinus turczaninowii) by Ian Stewartson. The photo is from Bonsai Art's web site.



Another Korean hornbeam (Carpinus turczaninowii). This one belongs to Mario Komsta. Photo also from Bonsai Art, which is a German language bonsai magazine.

Basement Tropical Bonsai in Iowa; or, as in Most Near-Death Experiences, Go to the Light

by Ivan Hanthorn

When I first began to collect bonsai, it was a warm weather experience. That is, I always seemed to acquire bonsai in warm weather, so there was an absence of an environmental factor to force me to consider winter storage requirements. Instead I could just relate to the incredible present beauty or future possibility of the bonsai material. So some were not temperate zone plant material. That can be figured out as winter gets closer. Who cares as long as the bonsai is really breathtakingly beautiful? Well, the plant does. It really does.

In the beginning (to use a very old phrase) I planned on using windows as the light source for “in-door bonsai” during the winter months. But a very few bonsai can quickly claim all of the available space close to windows. So I began the process of buying more and more florescent work light fixtures to suspend over the tables of temperature sensitive bonsais in my basement. The area was warm enough, but the light was inadequate. Being an American, it was obvious what the next step needed to be: Buy More, Get Better! I acquired better quality light fixtures with more bulbs in them (4 instead of 2 tubes), I switched to the “new and improved” versions of florescent tubes, T8s and then T5s. With each upgrade I lost fewer tropicals during the long winters. When I did lose a tropical, I was forced to look even closer at cultural practices. Failure is always a learning opportunity.

I believe I have now arrived at the point that I should have been at long ago with regard to lighting for winter bonsai storage of tropical and sub-tropical material. This is in large part due to the internet, and eBay. Let me explain. First of all, there has been a revolution in a sense in florescent lighting in the last decade. It was not that long ago that the black box temperature, or color temperature, of lighting bulbs was not common knowledge and not provided by vendors. There were essentially two kinds of florescent tubes: warm light and cool light. Plant collectors knew that neither provided the appropriate storage lighting needed by most plants, so they paid outrageous amounts of money for “plant lights,” sometimes called “grow lights,” which provided light at the appropriate wave length for plant survival (although that wave length was often not clearly printed on the label). Now, a large array of different wave length florescent tubes are available, particularly in T8 and T5 tube sizes. They are easily and cheaply available on the internet, especially on eBay. Thank you China.

In addition to the bulbs, an array of pre-loaded fixtures are also easily and cheaply available from the same sources. So one can now acquire 2 tube, 4 tube, or 8 tube light fixtures in 2 foot, 4 foot, or 6 foot lengths, all with tubes already mounted in the fixtures. On eBay many of these light fixtures and blubs are unbranded, coming directly from the factory. Additionally, the color temperature range is often part of the choice. Color temperature is expressed In Kelvin units (K), e.g., 6500K.

Color temperature ranges now common on T5 and T8 fluorescents include: 2700K–3000K – Encourages blooming; 6400K–6500K – Natural daylight, good for growth; 10000K – Crisp white color, full spectrum daylight. A common configuration available includes 2 3000K bulbs (red content) and 2 6500K bulbs (blue content) together in a 4 tube light fixture to provide the widest light spectrum suitable for all stages of plant growth.

The T5 size fluorescent tube is quickly claiming the field in plant grow lights. This size is the most efficient source of fluorescent light now available, approximately double the lumen output of T8 and T12 standard lamps. The Lumen per Watt ratio (meaning electricity used compared to light output) of the T5 is comparable to Metal Halide, which used to be the gold standard for professional grade plant lighting. Most of the new T5 lamps marketed to plant enthusiasts are “High Output.” The high output version (HO) of T5s produce about twice the amount of light as the standard T5 bulb. Furthermore, these High Output T5 fluorescent lamps produce very low heat; therefore, the light can be placed closer to the plants, resulting in greater light intensity when compared to Metal Halide lamps.

Technological aficionados are currently obsessed with LED, so it is no surprise that LED grow lights are the newest lighting option for plants. They are advertised to be the most efficient and coolest running grow lights available. They are particularly popular with orchid addicts. Currently none outperform much cheaper fluorescent grow lights of similar wattage. LED plant grow lights are also not recommended for use with plants that you want to be viewed, because they give plants an unnatural appearance when the light is on.

T5's register an amazing amount of lumen output. Lumens are the current standard form of light measurement. One lumen is equal to the light intensity emitted by one candle that sheds light on one square foot away from the candle. A 24 watt two foot T5 will emit 2,000 lumens, while a 54 watt four foot T5 will give out 5,000 lumens! So a new 8 lamp 4 foot HO T5 fixture would put out 40,000 lumens. That is a lot of light—to the human eye. However, lumens are a measure of light visible to the human eye. What plants need from the full light spectrum of nature is the 400nm to 700nm spectral region that plant biologists define as “photosynthetically available radiation,” or PAR. (A device for measuring PAR, micro-mols per second ($\mu\text{mol/s}$), indicates how many photons in this spectral range fall on the plant each second. The PAR light range is broader than the human eye light perception range.) T5 fluorescent lamps produce a color spectrum that works optimally for plant growth. Photosynthesis peak rates (435 nm and 680 nm) are virtually even with the spectral rates of the T5 lamp.

So, what has the effect of the lighting revolution been on my bonsai wintering quarters? I installed my latest T5 fixture earlier this fall, replacing a 2 lamp T8 fixture that had shorted out once too often. The visible sparks and the melted plastic pin socket were signs even the obtuse could not ignore. The new lamp fixture has 8 lamps with dual switches allowing 4 or 8 bulbs to be on, thereby allowing different lumen levels to be used. Highly reflective aluminum lens above the bulbs direct the light down. The frame has a plug in, so a group of these light fixtures can be daisy-chained together. I installed two similar T5 fluorescent fixtures last fall. So now I finally have the full lighting I now believe is required for the healthy over-wintering of my surviving temperature sensitive bonsai. If you have not yet moved to T5 fluorescent lamps for indoor bonsai, do investigate. They are very affordable to purchase and to run.

The following photos are of my winter bonsai quarters with the new light fixtures described above.





Hamamelis virginiana bonsai

Sweetness In the midst of melancholy—Hamamelis

Ivan Hanthorn

I was raking the leaves last Friday, trying to get the yard waste corralled and bagged before the Free Day at the Dump in Ames on Saturday, when I had to stop and stare at the shrub that always stops me dead in my tracks once a year on a day just like this one. The Witch Hazel was in bloom. Most of the leaves were now gone, as they should be, all the better to show off one of the most beautiful blooms in the Hamamelis family. Its fragrance is somewhere between sweet and intoxicating on a fine fall day.



Hamamelis virginiana blossoms in my back yard

Witch Hazel, or Hamamelis, is a genus of deciduous flowering shrubs with three species native to North America (*H. ovalis*, *H. virginiana*, and *H. vernalis*), and a species each in Japan (*H. japonica*) and China (*H. mollis*). All of the Hamamelis species except one bloom in January–March. Thus they would be a perfect candidate for the Japanese habit of bonsai shows during the winter months, a bonsai with blooms when other deciduous bonsai are absent

leaves and blooms. *Hamamelis virginiana* blooms in September–November. Another one of the plant species that if bonsai'd is going to be at best outside of the usual show calendar, such as forsythia.

H. virginiana is native to eastern North America from Nova Scotia west to Minnesota, and south from central Florida to eastern Texas. Thus it is the species of *Hamamelis* usually referred to in the traditional use of the term *Witch Hazel* as a botanical reference in North America. The leaves and bark of this species is the source for a long used medicinal astringent also referred to as Witch Hazel. An extract from *H. virginiana* was used by native Americans medicinally and continues to be used as a component of a variety of healthcare products. (It's mainly used externally on sores, bruises, and swelling. Witch hazel hydrosol is used in skin care. It is a strong anti-oxidant and astringent. It is often used as a natural remedy for psoriasis, eczema, aftershave applications, ingrown nails, to prevent sweating of the face, cracked or blistered skin, for treating insect bites, poison ivy, and as a treatment for varicose veins and hemorrhoids. It is found in numerous over-the-counter hemorrhoid preparations.)

Finding a good photograph of a *Hamamelis* bonsai can be a challenge. There are two bonsai that are well known, but the findings are slim after these particular two. The first is an *H. virginiana*. See the introductory photograph. The photograph is what is well known, as it is ubiquitous on the internet. Yet no one seems to know to whom the bonsai itself belongs or where the photo originated. At least that is the story from Heather Coste on her blog site, Kitsune Bonsai (Wednesday, February 15, 2012).

The other *Hamamelis* bonsai, well known in the Midwest, is at the Chicago Botanic Garden. This wonderful bonsai was donated to the Garden's Bonsai Collection by Japanese bonsai master Susumu Nakamura in 2002. It is an *H. japonica*. The blooms, appearing in January–March, are darker and richer in color than the *virginiana* but not nearly as fragrant. See the following photos.



Japanese Witch Hazel (*Hamamelis japonica*) in winter bloom, Chicago Botanic Garden, two views

From the Kitsune blog noted above--which was entitled "Bonsai Plant Profile: Witch Hazel"—I have borrowed the following notes regarding witch hazel bonsai care and maintenance.

– Hardiness ranges from zone 8 to zone 3, so be certain that the species you are choosing is appropriate for your winters. A cold frame or hoop house style greenhouse can mitigate those requirements.

–Because you will be showing this tree when it is naked, the ramification and fine branch structure is incredibly important. Witch Hazels can have lovely, fine and delicate branching with some work, and are well worth the effort.

– Well cared for and fertilized, many species of Witch Hazel can take a lot of insult and heavy pruning. Limit the majority of your pruning to early spring to early summer, to allow the tree to rest and form buds for the following winter if you expect to show it.

–Witch Hazels like full sun to partial shade, and when grown in the landscape can tolerate quite a bit of shade. In a bonsai pot especially, offer protection during the summer from midday sun, and their leaves can scorch.

–In the summer, Witch Hazels tend to like a lot of water, and while good drainage is required, these trees should be allowed to remain moist and never allowed to dry out.

–Witch Hazels are largely pest resistant, though occasional scale and aphids will be a problem, especially if over fertilized in mid to late spring. They are also a loved food of certain caterpillars, but this is less of a problem in bonsai cultivation than it is in the landscape. *H. mollis*, Chinese Witch Hazel, is sometimes affected by Powdery Mildew.

–Fertilizing is fairly standard for an average deciduous tree. An occasional dose of an acidic fertilizer can be beneficial, as they prefer slightly acidic conditions.

Witch Hazel is delightful on a bonsai bench, in your garden, or on your bathroom shelf. Brighten the dark side of the bonsai year. Put your hands on a Witch.



What is the Future of My Bonsai Tree??

By John Denny

Man has always had an insatiable desire to know the future. How powerful that knowledge could be to us in our personal lives and collectively to mankind. Imagine the things we could do with that knowledge?

But, for the moment, let's just apply knowledge of the future to our bonsai trees. In bonsai we love control. We wish to control growth, insects and disease, shape, size, etc. As Gary Wood says, "That's why we buy scissors and wire!" While trying to create and maintain the look of a bonsai, one must exercise considerable control over many factors. Bonsai training techniques are the way in which we express control over the tree. The key to these techniques is the ability to visualize what the tree will look like after applying these techniques. In other words, we have to be able to "see the future".

On bonsai trees, there are indicators which will give us strong clues as to how our tree will look next year and beyond. A good artist will use these clues to plan and then create the future he wishes for his tree. The main indicator of the future is bud structure. In late summer and fall, these buds are visible on our trees and can be used to "read the tea leaves". With understanding of buds and their behavior we can know what the plant intends to do next growing season – and how we might alter its plans if we wish. This is especially true of more finished bonsai, where we want to control how the bonsai looks, but do not want to do heavy handed manipulations.

Buds contain the potential for new growth the following spring. The presence of many strong buds indicates a healthy strong tree and the potential for major growth. While the presence of fewer, smaller buds will result in less overall growth with smaller leaves, shorter internodes, and finer stems. New growth will be oriented in the direction of the bud's direction. Think of alternate budding species like elm or hornbeam vs opposite budding like a maple. On alternate budding branches, you can control the future direction of that branch by where you cut. If the last bud you leave points towards the left, that is the direction that branch will extend in spring and summer. Cut one bud shorter, leaving the last bud pointing to the right and your branch will now grow to the right. If you cut two or three times in a row over time, your branch will curl around and grow back in towards the trunk. Not what you want! So, you control the future by knowing how buds work. You can also use this knowledge to avoid future growth pointing up or downward where you do not want it.

Another bud issue that controls the future comes from the fact that the apical bud on a branch sends auxin hormones back towards the roots. Among other things, auxin tells the secondary buds on its branch not to grow out. The result is a long and strong growing branch tip. However, if you prune away the apical buds, now there is less auxin telling the secondary buds to chill out. In this case the secondary buds spring into action and you get active budding further back inside on your branch(es). Cool, huh? You know the future of your tree and you can determine if you want branch extension or active secondaries and ramification.

Buds can be determinate or indeterminate. Determinate buds (think pines) are capable of producing only a certain amount of growth in the spring and summer, regardless of how good conditions might be for growing. Indeterminate buds, if growing conditions are good, will continue to grow longer and stronger if resources are available. Pines, if left alone, will generally only push growth once in spring and early summer. On some pines, we can jump in and cause a second flush of needles if we wish, resulting in smaller needle size and shorter internodes via pine techniques. Again we see and control the future growth and shape of the pine tree bonsai.

Understanding buds and how they work will lead us to being able to see what the tree shape will be next spring and into the future. We can accept this future, if we like it, or we can use appropriate bonsai technique to alter the future of our tree so it grows into a shape more in tune with our vision for the tree. Pay attention to the buds and you will be able to read the future!