

**Next meeting - February 23rd, 2022
 Back at Matthaei!!**

At least that's the plan.. Matthaei is expecting to be open for group activities by then. Of course, this is dependent on the vector of the virus maintaining a downward course and recent news of new variant breakouts may put that at risk.

Jay Sinclair is busily working out a possible schedule of speakers for the upcoming year, with these considerations in mind.

Here's a great tree to fuel your bonsai dreams until next spring.

This tree was brought to the club's September auction.



The tree was designed and brought to the auction by Jack Sustic. Kurt Smith of the Flower Market was the lucky winner.

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**President's Perspective
 Mark Hanner**

Greetings-

Our last meeting brought the schedule to a close for 2021, and the recent below-freezing weather brought the growing season to a sudden end, as well. Regardless of our different over-wintering strategies, we have all been busy getting to it, and for Becky and me, it involved a couple days of hauling pots and plants into the greenhouse, and leaving plenty of room for the outdoor kitties to sleep, eat, and hang out. This is when the lower branches and twigs on our Japanese maples see a lot of abuse, as the kitties rub their chins against the trees. Obiwan, Yoda, and Kenobe have yet to develop the bonsai aesthetic.

Our thanks to the members who agreed to extend their terms on the executive board, via last month's election. We still need to fill one position now, the Communications Secretary, whose job is to post the program announcements via the club email roster, and to our Facebook page. Please give some thought to whether you can help us with this job, and contact me with any questions (mhanner@aol.com). We will have two positions opening late next spring, and these would best be filled in advance, so Laura Andre can help with the transition. These are Membership, and Webmaster/Zoom Coordinator.

Predicting how the pandemic will affect us months in advance is certainly a shot in the dark, but we are hoping to have our February 2022 meeting in-person, at Matthaei Botanical Gardens, like back-in-the-day. Matthaei is anticipating opening up to group activities, and Jay Sinclair is working on a schedule for next year that doesn't involve sitting in front of our laptops and tablets. Stay tuned!

October Meeting Notes

Chris Kehrig

October 27th, 2021

Last meeting of the year

Annual Election was a 100% vote

Bob Bauer is dropping out of communications which will need to be filled

Laura Andre is coming up on graduation so Membership/Zoom will need to be filled

Matthaei Gardens will be open for our next meeting in February

Special guest of the evening was Jim Doyle

Jim covered Literati Bonsai. He has owned Nature's Way Nursery in Harrisburg, PA since 1973. We started off with a video that showed Jim's workshop, sales, grounds, growing area, and presentation area. The hoop houses have the outer layer removed for summer and put back on for winter. His nursery has a varied mix of evergreen and deciduous with all types of style.

Literati Bonsai was started ~2,000 years ago in China. Korea was next and then Japan caught on. The main part of Literati is an expressive trunkline.

While Jim used to import trees for years, he has gotten away from it. Literati does not have rules. The main features are a trunk with movement, but it is not limited to trees. Literati has an emotional/feel. Some of the examples even had shots from nature that can be called Literati. In Japan, Literati is reserved for masters. Everything that is unnecessary is deleted. Jim likes saying see the hole, not the donut. While Literati is usually an

evergreen, it can also be deciduous. It can also be in a grouping.

Jim had shown many pictures as examples. The envelope should be pushed and not just follow the Japanese or Chinese. Some had a small bit a foliage at the top and others had the foliage moving down and layered.

There should be a year or two before any major work is done to a tree. Don't be in a hurry to kill your tree.

Literati put into one word can have many examples such as: discovery, inspiration, essence, evolution, spiritual, and continuation.

Next was discussion and examples on 3-point display. Started off with a Ponderosa Pine, scroll, and accent plant. Jim switched up the display many times for critique. It was interesting how much the display would change with just one element switched out.

Pots can vary depending upon tree. Jim likes to put the pot in front of the tree to see about proportion, shape, and color. Also, through death there is knowledge. Try to learn why the tree passed on.

Revisiting Wikle Bonsai Writing By Jack Wikle

Tree – Annual Cycle

Certainly, one of the appeals of growing bonsai for many of us is the heightened sense of awareness we experience – closeness to nature and its cycles -- as we enjoy working with our trees. Even needle-evergreens, seemingly unchanging to the casual observer, exhibit a fascinating annual pattern in their transitions through spring bud swelling, vigorous shoot extension and eventual dormancy. As witnesses to life's ongoing rhythms, we are somehow comforted by nature's persistence.

Much of what I say here will be mostly familiar to some readers. Hopefully, others will be helped in feeling closer to nature and to their bonsai and in being more alert to the needs of their trees and the opportunities they offer.

It is, of course, energy from the sun captured by photosynthesis -- taking place only in green plants -- that drives almost all of life's processes. The notable

exceptions to this are some obscure bacteria that obtain their energy in other ways.

Simple carbohydrates, the product of photosynthesis, are both fuel (ultimately oxidized to release energy) and building materials (ultimately transformed into a host of more complex compounds) that become the substance of trees. The transformation of simple carbohydrates into plant tissue is just one of many unseen plant processes having great energy “costs.” As a number of authors have suggested, carbohydrate can be thought of as “tree money.” When carbohydrate expenditures -- this includes fueling routine cell processes, new construction use, production of defensive chemicals, and damage control when defenses are breached – consistently exceed income from photosynthesis, the tree eventually dies, typically done in by decay organisms taking advantage of its weakened condition. On the other hand, when carbohydrate income exceeds expenditure, reserves are stored – “banked” if you will – in living tissues throughout the tree. The tree consistently accumulating more carbohydrate than it uses is a thriving tree that can tolerate considerable adversity.

Even in very warm climates, the annual growth of some trees is intermittent, but where seasonal climate change prevails, winter dormancy with no growth taking place is the common pattern. Be aware that even in “deep dormancy,” the living cells of trees are still consuming energy – the cost of keeping the fire of life going – although at a much reduced level. A tree does not come out of dormancy with as much energy reserve as it had going in.

Interestingly, the deep dormancy tree is genetically programmed to require a certain number of hours of cold exposure (as little as four weeks to as much as three months or so depending on species) before it can begin growth again. Temperatures that satisfy this chilling requirement are cold but not too cold. (Levels about 40 degrees F. are known to be most effective.)

When a tree’s chilling requirement is met and days lengthen, the tree enters a state of semi-dormancy as root growth begins again and top growth is possible with enough exposure (more than just a day or two) to warm temperatures. The perceptible swelling of buds which have been unchanging all winter will be the first indication the tree is ready to push out new shoot growth when warmed enough for long enough. This is the “bud swell stage.”

When the largest buds (programmed to produce the earliest and most vigorous growth) enlarge to the point that green tips are evident, a strong “push” of shoot growth is imminent. It is common for needle-evergreens to also exhibit a discernable foliage-color change, going from muted, somewhat rusty-green or yellowish green to a brighter, more intense, green color about this time in their cycle. At this “green tip stage,” new root growth is already well under way.

The exact timing will vary greatly with the kind of tree and prevailing temperatures, but green-tip-buds soon expand enough that the much compressed and tightly folded tissues they contained have space to unfurl sufficiently that a tiny leaf (or a pair of leaves on opposite-leaved trees) can be seen distinctly. This has been described as “first leaf stage” in the tree cycle. On some needle-evergreens, the growth erupting from the green tipped bud will be seen as a tight cluster of tiny needles. On the new pine shoot – often referred to as a pine “candle” – it will be some days before needles are discernable. Some American authors have used the terms “pineapple stage” for the apparently needleless candle and “porcupine stage” for the candle with small needles clearly visible.

On the deciduous tree, the new shoot is, at first, just a leaf or a pair of leaves. This is followed by another leaf or pair of leaves pushed beyond the first. Then more and more leaves are produced farther and farther along on the shoot that seems to be telescoping outward as it lengthens. Typically, the largest leaves will be toward the end of the elongating shoot but not those at the tip which are still very young. This outward “push” of new shoot growth can be surprisingly rapid – almost violent – on some kinds of trees with several leaves appearing in a few hours on a warm day and several times that many leaves appearing in a few days when conditions are favorable.

This “soft shoot stage,” with a number of leaves out and expanding while more leaves keep appearing as the shoot lengthens (shoots limp and needles still very short on needle-evergreens), seems to be universally considered the most vulnerable stage in the tree’s annual cycle. It is stored carbohydrate reserves almost entirely that have been used in this “new construction,” and the new solar panels (fresh foliage) have yet to produce enough carbohydrate to repay their “building cost.” Not surprisingly, the tree is genetically programmed to keep something in the bank, to not use all its resources in new growth, but reserve levels are drawn down dramatically reaching a yearly low at this time in the annual cycle. Interestingly, root growth normally continues during the

soft shoot stage but at a much diminished rate. Peak top growth and peak root growth are not simultaneous. In fact it is typical for any treatment which stimulates growth of one to limit growth of the other.

As weeks pass and new leaves accumulate -- and all the while leaf blades keep expanding -- activity of these new solar panels eventually results in carbohydrate production that exceeds their construction costs. New investment is paying off! And, the new shoots begin thickening and stiffening. As this maturation of shoots and foliage takes place, new buds (structures with the potential of producing future new shoot flushes) become increasingly evident, at least one at the base of each leaf stem. Buds along the shoot rather than at its tip are usually referred to as "lateral buds." Depending on species, some of these new buds will eventually be capable of producing shoots with leaves, some shoots with flowers, and some shoots bearing both leaves and flowers.

Some "determinate growth" kinds of trees are genetically programmed to cease shoot elongation for the year and form a prominent "terminal bud" at the shoot tip in late spring or early summer. Other species just keep adding foliage on actively elongating shoots until growth is halted by drought or cold late in the year. And, some kinds produce intermittent shoot growth when lateral buds formed earlier in the season, in turn, become active producing shoots that are branches from the primary shoot. Yes, branches on the branches in one growing season. The hardened shoot, no longer elongating, with leaves (or needles) fully expanded, and with prominent buds now darkened in color rather than green and tender, is said to be "mature." This "mature shoot stage" may occur as early as late June on some kinds of trees and well into September on others.

As shoot hardening progresses and more carbohydrate is produced than is used in new construction, the excess is increasingly diverted into trunk thickening (widening the annual growth ring), into root growth, and into storage which takes place in almost all living parts of the tree. On the tree mature enough to flower and produce seeds (encased in fruits or nuts of any kind) significant amounts of energy are consumed in this reproductive growth. Flowering and fruiting activity typically limits other growth and reduces buildup of stored carbohydrate reserves. Incidentally, it has even been proven that retained pine needles are storage sites for unused carbohydrate.

By the time, shoot elongation and leaf expansion (or needle lengthening) are essentially complete and new

buds are easily discerned, stored reserves have been building for some time. However, this storage activity accelerates rapidly after shoot growth slows and ceases, typically peaking sometime in mid to late summer.

While genetic variation makes each species different, this "matured shoot stage" is thought to be second only to bud swell stage in the spring as a good time for collecting, repotting, heavy wiring, and other high stress work on the tree. At this time, the healthy tree will have accumulated enough stored reserves to tolerate the work you want to do with it and still keep going. Work on the sluggish tree, one that has been weak and struggling, should be postponed until it shows definite signs of recovery and increase in vigor.

In response to shortening day lengths and increasing cold (and perhaps diminishing light intensity) trees eventually begin to go dormant in preparation for cold weather. The "first fall color" on deciduous trees typically appears about the time older needles on pines, usually needles produced the previous season ("two year old") or the season before ("three year old"), suddenly lose their green color and become noticeably yellow then brown before being discarded. Yes, even an evergreen sheds older foliage annually. Carbohydrates and much of its nutrient element accumulation are moved out of foliage to be discarded, before it is shed, and moved back for storage in the tree's branches, trunk and root system.

From "peak fall color" until leaves have dropped is a time of opportunity with some trees and a time of caution with others. Even though roots will continue to be active until the ground is deeply frozen, carbohydrate production is greatly diminished in evergreens and at a standstill in deciduous trees. Making the tree dip into its stored reserves to deal with avoidable stress at this time adds greatly to the normal rigor of winter. As Stanley Chinn, a very astute bonsai grower said to me years ago, "The weak tree has barely enough money to buy food and you are giving it a doctor bill too."

Be extra careful with non-native trees, especially kinds of borderline hardiness, at this season. Often they don't read unfamiliar day length changes and cold exposure signals clearly and may not go dormant quickly enough to escape significant cold damage. This is especially true if they are pushed to continue earlier-season activity by ill-advised late fertilization, pruning, wiring or unseasonably high temperatures.

Some tree scientists, most notably Dr. Alex Shigo, have suggested that the second most vulnerable stage in a tree's annual cycle is the first fall color stage when nutrients are being drained from leaves and returned to storage in the rest of the tree. Shigo says we do not understand completely why this is. We do know that root growth continues through this period until stopped by cold, and that work on the top of a tree almost always inhibits root activity.

After leaf fall, dormancy deepens further, again in reaction to shortening days and cold exposure. Yes, exposure to cold, if not too extreme, makes trees (tops and roots) more cold tolerant. When dormancy becomes deep enough, the tree, in its minimum maintenance phase, will not grow again until its chilling requirement has been met. Then the annual cycle begins again.

Notice particularly the underlined terms in this article, these are all mile markers that can be useful in timing the work you do on your bonsai and in keeping meaningful notes on your work.

February 2009 update of January 2005 AABS Newsletter column

Ads in the Newsletter: All members can offer for sale any bonsai and bonsai related materials in the newsletter or at the monthly meeting with no sales fee. AABS Society Members' ads are free to publish in the Newsletter. Deadline for submissions to the Newsletter is the 5th of the month.

Prizes for the Raffle: We are soliciting donations suitable for prizes to be raffled during each general meeting, and, for the Annual Bonsai Show Raffle. If you have a tree, bonsai pot, tool or anything else bonsai related, that you do not use anymore and is still in good condition, consider donating it to the Society. Please see Bill Struhar at any meeting, email Bill at wm.struhar@mail.com or call (586) 468-7169.

Club Logo Now Available: we will embroider the club logo on your garment for \$12 (plus modest additional charge for lined garments).

The logo comes in two forms; light green tree on dark green background, or dark green tree on light green background, with a border on both combinations and

AABS lettering and Chinese characters with appropriate contrasting color depending upon the garment color. Bring your garment in a clear plastic bag to a meeting, select your colors, pre-pay Bill Struhar, and your garment will be ready one or two meetings later. (The vendor may require a minimum of five garments per order)

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The AABS President is an ex-officio member of all committees with the exception of the Nomination Committee.

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Membership dues are \$25. Please pay by check, written to Ann Arbor Bonsai Society or bring your credit card to the meeting and pay. AABS now accepts credit cards and paypal for membership fees and other AABS activities. Please talk with the Treasurer at the next meeting.

Katie Norder – Treasurer AABS
Attn: AABS Membership
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The Ann Arbor Bonsai Society is affiliated with the American Bonsai Society: <http://absbonsai.org> and the Mid-American Bonsai Alliance: <http://mababonsai.org>



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Visit us on the Web:

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