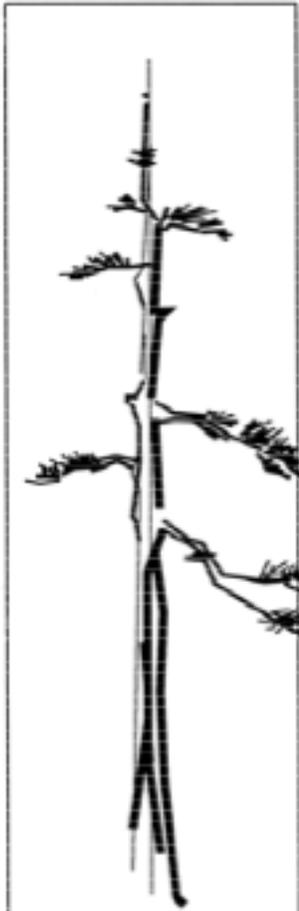


Bonsai News



Milwaukee

Bonsai Society

P.O. Box 240822

Milwaukee, WI

53224

Information Line

414-299-9229

Tuesday night meeting

Leo Schordje will be our featured guest. We have included an article that Leo wrote for us to enhance our understanding of Bamboo.

Why grow bamboo? Simply, it is beautiful. A well groomed planting has an exquisite charm that provides a delight for the eye. Bamboo is the quintessential symbol of Asian culture, it is a cultural symbol in every nation where it is found. In bonsai bamboo is often used to set the season and location, usually summer, cool shade, and is used to represent a location near a stream, or a lush forest edge, or a valley setting. A planting of bamboo can be an accent plant to accompany a bonsai or it can be the focal point of a display itself.

This is the preface information for the MBS meeting November 4. In this hand out, most of the names I will use, and terms I use will be defined and spelled out, so that note taking at the meeting regarding names won't be necessary. I am not going to

2014 Events

NOVEMBER

- Nov 4 - SOCIETY MEETING
Bamboo / Update on
Fertilizers with Leo Schordje
- Nov 8-10 - Peter Tea
Advanced Classes #3*
- Nov 16 - Open workshop 11-2
- Nov 21-23 - Holiday Folk Fair

DECEMBER

No Society Meeting

JANUARY 2015

No Society Meeting

***Members only**

repeat the the information that appears in this hand out during the meeting, rather my talk will start roughly where this hand- out ends and build from there. So if you have time, please read this as it will give you the background you will need for growing bamboo as bonsai. This is the "prequel" to the talk.

(continued on page 5)

NEXT MEETING

Tuesday Nov 4 - 6:45

Boerner Botanical Gardens

President's Message

“Get Involved”

It often appears to members that MBS doesn't need volunteers. Nothing could be further from the truth. MBS owes its existence to volunteers. Volunteers produce the newsletter, schedule speakers, develop workshops and programs, teach classes, and stage larger scale events that take months to plan.

In order for MBS to continue to be viable, it is inherent that new members as well as current members volunteer. If we continue to rely on the same group of volunteers to get things done year after year, we will eventually exhaust our supply of volunteers (figuratively and physically).

Don't know how to volunteer? Here's how you can get started:

- Attend MBS Events: Talk to the event coordinator or board member. Listen to announcements during the meetings and talk to the people in charge of events or projects mentioned at the meeting.
- Keep reading our newsletter. For an upcoming event, call the person(s) in charge to find out what still needs to be done. Apply for the volunteer openings mentioned.
- Review our website (www.milwaukeebonsai.org). Our Contact Us page lists all the board members. Each of these board members is a volunteer, and knows exactly what needs to be done to keep MBS running smoothly. Contact one to volunteer.

Our organization has been very lucky to have over 10% of its membership willing to take an active role in maintaining quality and professionalism, continually making this bonsai organization a worthwhile investment.

Holiday Folk Fair is coming up this month, November 21 thru 23, and we need tree sitters and some trees to display. Contact Steve Co. If you would like to volunteer. Thank You.

Greg

Oh, boy. Construction, construction construction! When coming to the November meeting, please use the following link to see what is closed and what is open. We hope this helps in getting you to Boerner without too much hassle!

<https://www.facebook.com/WisDOT/photos/a.244273872263782.67873.209019205789249/865247840166379/?type=1&theater>

CONGRATULATIONS to the officers of the 2015 Executive Committee

President	Greg P
First VP	Kris Z
Second VP	Judy S
Secretary	Julie McN
Treasurer	Barbara S
Director	Teri W
Director	John Men
Director	Susan L
Past Pres.	Steve Con

Are you knowledgeable about web design? Might you consider helping our webmaster keep our website looking great? If so, please contact Pam W mbsweb@hotmail.com

Excellence in Bonsai Program



It is with great pleasure that I announce to you a new educational series for the Milwaukee Bonsai Society named Excellence in Bonsai Program. This program will bring to Milwaukee a series of the very best artists from the bonsai community around the world. The bonsai artists will visit Milwaukee to educate our members by passing on their expertise. They will also view and comment on the Public Bonsai Collection, which could be in place before the first artists' visit.

The Excellence in Bonsai Program has been funded by the generosity of our former Society and Executive Committee member Anna Stadnicka and her sister Katarzyna of Krakow Poland. The \$60,000 donation to the Excellence in Bonsai Program in memory of Anna will be overseen by a three member board with Stephen Contney as chairperson, Ted Matson our Society sensei and Jerry Niemiec. All three of the EBP board members had a special relationship with Anna.

The EBP board will be charged with choosing the guest artist, arranging for and paying for all transportation expenses as well as any artist fees associated with events that benefit the entire membership. The board will also schedule and set the fees for workshops with the artist if there are to be any with the proceeds going to the Milwaukee Bonsai Society. The EBP board will be accepting suggestions for future guest artists for this series. Our goal is to bring one significant bonsai artist to Milwaukee each year starting as soon as possible depending on artist availability.



The members of the Intermediate class spent a cold day at the home of Jack D and Michelle Z viewing the bonsai garden and working on their trees. What a wonderful experience to cap off their classes.



Did you know that you can advertise in the newsletter for free? If you have something for sale, trade or to give away, let us know in 3 lines or less.

TIPS FROM ANDY SMITH

As many of you know, Andy Smith will be coming in March of 2015 to work with MBS on Ponderosas et al. Here are some tips from Andy as to how he keeps his tree alive over the winter in South Dakota.

I have always kept my own trees on the ground in unheated hoop houses. Usually it gets fairly cold in there, but this year it got down to -18F. I did lose some trees that I had had for 10-15 years. But most things did fine. I'm not sure the cold was the main cause of the mortality, since several of the trees I lost were fairly large and were outside during our early fall blizzard. So several feet of very heavy, wet snow fell on them at the start of October. I don't know why that would cause them harm, but many of the ones that were still outside during the storm didn't make it.

I have noticed though that ponderosa pine are more susceptible than you would think to extreme cold spells. This seems to be especially true with trees after they have been in cultivation for several years. Harold Sasaki's theory on this is that after the tree gets healthy the roots grow around the outside of the pot and if it is exposed to a flash freeze the live root tips get a freezer burn and are killed. What I have noticed around here is that we will have sudden very cold snaps in the early fall, that come with no previous cool down. Trees that are still growing may be killed by this. It's hard to prepare for since it's a very unpredictable thing. Once they are dormant they seem to take the cold very well. My hoop houses do warm up and get above freezing on warm days. But on the ground most of the trees stay frozen anyway. I have not noticed that thawing causes problems.

BAMBOO (continued from page 1)

Definition:

Culm = Cane, bamboo is essentially a giant grass, and the correct botanical term for a single growth of grass emerging from the soil is culm. I will use the terms interchangeably,

Rhizome = the underground horizontal stem from which the roots emerge, and the buds for new canes develop at the ends and at the nodes or joints. The structure of the rhizome is similar to the structure of the canes (culms), in that it has nodes, similar in structure to the ones found in culms. Rhizomes usually are solid, but may have a hollow centers depending on species. The rhizome is the starch storage structure for bamboo. It is the "heart" of the plant, when growing bamboo, the goal is to create conditions for healthy rhizome development, the canes will be healthy if the rhizome is healthy. When purchasing bamboo, it is the rhizome that is important, not so much the condition of the canes & leaves.

Running Bamboo = the new culms (canes) emerge from the ground at some distance from the initial planting. Typical example would be any species in the genus *Phyllostachys*. A rhizome can grow and extend as much as 30 feet in a single season, a rare occurrence, but it can happen. Generally the bad reputation of bamboo comes from people planting it and then forgetting about it for a decade or two. By then the bamboo will have gotten out of control. Some sort of containment system, or rhizome barrier must be used if you plant a running bamboo in the ground. For containment, polyethylene barriers must be at least 3/16 inch thick, preferable is 3/8 inch. Sheet metal, or aluminum work well. Compacted gravel, such as a frequently used driveway is an adequate barrier. The Royal Botanic Garden at Kew, UK, uses 50 ft expanse of mowed lawn between the bamboo beds in the outlier planting, where they grow their less ornamental species of bamboo. Lawn mower cuts "out of bounds" shoots off before they can feed the rhizome. Eventually the wandering rhizome will exhaust its self without new canes to nourish it. In the Kew display gardens, they use barriers that are at least 36 inches deep, made of sheets of steel. (they were installed before polyethylene was invented). It is irresponsible to plant a running bamboo in the ground without planning for containment. Fortunately 2- 4-D, and Round Up herbicides do work on bamboo if applied several times, to the foliage of a culm, about 2 weeks between applications. Herbicides would not be my first

choice, but if a cane comes up someplace that is difficult to get at, herbicides can be a useful last resort. My favorite control method is to harvest out of bounds bamboo shoots while still young & tender enough to use as the vegetable side dish with dinner. Bamboo shoots steamed with slivered ginger, and sprinkled with a little lemon juice is delightful. Or stir fried with a little toasted sesame seed oil and chili garlic paste. How can you go wrong.

Clumping Bamboo = for clumping bamboo, the new culms emerge very close to the previous year culms. This type of bamboo does not spread widely. A good example are the bamboos of the genus *Bambusa* and genus *Fargesia*. One still needs to think about containment when planting *Bambusa*, even though *Bambusa* is a clumper, most are vigorous rapid growers in the tropics and a plant can take over a lot of ground in relatively few years. Generally the vigor of *Fargesia*, when grown in Wisconsin, is slow enough that usually a *Fargesia* won't grow beyond a three foot radius in two or three decades. The *Fargesia* have been hyped as the best hardy bamboo to use, but I have found them to be poor performers, with thin wispy growth, many near leafless canes and almost no visual impact as a landscape planting or a bonsai specimen. For this reason I won't be discussing *Fargesia* clumping bamboo, I don't grow it very well. Generally for hardy bamboo, you will be happier with the appearance of a running bamboo than a clumping bamboo. With a running bamboo in less than 5 years you can have a very beautiful plant.

A bit about the structure of bamboo. A culm is a hollow tube structure, made of parallel vertical bundles of cellulose fibers, with few or no horizontal cross linking fibers. The culm has partitions or nodes, a node consists of a woody disk, or septum that divides the hollow interior space into segments, much like the joints of a stem of grass. Each year as the culm wall matures, starches are replaced with cellulose fibers and lignin, which increase the structural strength of the culm, but do not significantly increase the diameter of the culm. There are no growth rings as one would see in deciduous trees. Strength of a culm increases as it ages, for wood work and craft use, culms are fully lignified, at furniture quality strength their fourth growing season. Diameter of culms relative to height varies by species, as does their utility for food, furniture and craft projects. Some species are cultivated primarily for food, some primarily for furniture, construction, paper and pulp, or craft purposes. Many species of bamboo are grown only for ornamental purposes. Vast majority of bamboo species do produce edible shoots, and are a significant food resource in their native ranges.

Life cycle of a bamboo cane.

For this discussion the cycle starts in late winter, while the ground is frozen the rhizomes rest. When soil temperatures become warm enough to wake up the rhizomes, they begin to

grow. Spring is when the many buds at the ends and at nodes along the rhizome begin to extend and grow upwards, the new culms are the bamboo shoots. Bamboo shoots are the most edible when just emerging from the soil. A bamboo shoot will grow from ground level to full height in one to two months. This means a cane that will be 18 feet tall, may grow as much as 8 inches per day. One can see the bamboo grow an inch an hour if it is a warm spring day. The new cane will not have any visible branches or leaves while it is doing this very rapid growth. The branches are there, held vertically against the culm, protected by the culm sheath. When growth slows as it approaches full height, the branches will extend, and drop from being vertical, pressed against the culm to near horizontal. This is when the culm sheaths normally dry and fall off.

Phyllostachys the culm sheath drops cleanly, without the need for intervention. Other genera of bamboo often retain the culm sheaths. Depending on the visual effect desired, you can leave them or remove them. If you have a tall planting, and branches are forming lower than the desired location, you can at the time of sheath fall, simply snap the offending branches off. They are young and tender at this time, and can be snapped off cleanly leaving almost no visible scar. If you allow a branch to harden off before removing it, then cut it, you will almost always end up with a sharp cut stump that is visually not pleasing and can cut if you run your hand over it. By the 8th to 12th week, the culm branches will have completed extending and will be fully leafed out. Until a new cane is 10 to 12 weeks old it is very tender and easily broken, by wind, or by any human activity. Transplanting is not advised during this time. Water demand is very high during this time, to get maximum height, it is important to not allow the potted bamboo get dry.

Older culms from previous years will not grow any taller, they will only send out branches and leaves on existing branches. The height attained the first season is the final height of the bamboo cane and the final diameter. Older culms from previous years will send out a new flush of branchlets and leaves about the same time the new shoots emerge from the soil. You can tell how old a culm is by the level of branch ramification you see. Two year old canes, the branches will have branches, on a five year old culm, you will be able to count back 4 levels of ramification from the initial single branch. Generally leaves from the previous year will yellow and fall as the new leaves unfold. Some bamboo species, (Indocalmus genus) will retain leaves for four or more years. Leaves on older more ramified branches will be somewhat smaller than the first year leaves, this is a 'leaf reduction' factor. When exhibiting a bamboo planting most growers remove all of the current growing season's new canes, in order to have only the smaller, more uniform leaves.

Late spring & early summer, culms begin to harden, adding cellulose, silica, and lignin. Older canes will do this at this time also, each year developing more strength. By 4th of July, culms have all leaves and height they will attain for the year.

Remainder of the growing season the activity is under the soil, the extension of rhizome system, and accumulation of starches for next year's growth. Transplanting and re-potting should be done either before shoots emerge in spring or after the canes have hardened off, anytime after the middle of July, through until end of September. The last root growth finishes up as soil temperatures drop in autumn. Ideally re-potting should be finished before the soils begin to cool significantly, though bamboo are pretty forgiving. If necessary re-potting can be done at any time of the year. Though late winter, early spring is the ideal time. With tropical bamboo, re-pot after the spring flush of growth is largely mature. There will always be some shoot activity, generally tropical bamboo recovers well from a few broken shoots.

The canes will live for upwards of 5 to 10 years, depending on species and weather. At some point an old cane will die, turning brown and drop its leaves. When doing seasonal clean up, remove these older dead culms. For hardy bamboo, in a normal winter the leaves will remain green all winter, for some species the leaves remain intact to temperatures well below 0 F. The exact temperatures that can freeze out foliage or top kill all the culms in a planting varies from species to species. Some, like black bamboo, *Phyllostachys nigra*, top kill at zero F. Some like *Sasaella masamuniana*, and *Indocalmus latifolius* have survived -17 F with only minor burning of the leaf edges. Winter location affects hardiness. Protection from winter sun and wind will improve hardiness. A cold sub-zero day with bright sun can burn the foliage off most species, where the same plant in the shade and out of the wind would stay completely evergreen. Majority of bamboo lose all leaves between -5 F and -10 F. If the rhizomes are healthy, this is not a concern. In spring the culms can leaf out. Somewhere around -15 to -20 F, even the most hardy of bamboo experience culm death. Again, if the rhizomes are healthy, you will still get a good flush of new culms in spring. Leave the dead culms standing until after the new culms have hardened off in July. The dead culms will provide support and keep the new culms from flopping over when they are new and soft. By the middle of July the new culms will be sturdy enough to be self supporting. Then you can remove the old culms. Back to back winters sufficiently cold to cause total top kill will weaken the rhizome system, then new spring growth will be fewer shoots, eventually death of the rhizome system. *Phyllostachys nigra* - the black bamboo cultivars with black canes, does best in zones 7 & 8, when planted in the ground here, most years you will have total top kill, the plant will come back weaker and weaker each year. Eventually nothing will come up.



The cultivars of *P. nigra* that are not completely black seem to be significantly hardier than the solid black clones. These may survive here, in the ground. A test planting of *Phyllostachys nigra* "Mejiro", a

bamboo were 3rd year canes and older are black with a gold stripe in the culm groove, 'Mejiro' in a 3 gallon nursery can, buried to the rim in the ground, experienced total top kill but came back with a nice heavy flush of growth after the -17 F winter of 2013-2014.

There is a bamboo for every sun exposure, most will enjoy full sun to half sun. Morning sun with afternoon shade is ideal for the vast majority of species. A few species prefer deep shade. Anywhere from 1/4 to 3/4 sun will keep most species happy. Bamboo adapt well to different light conditions.

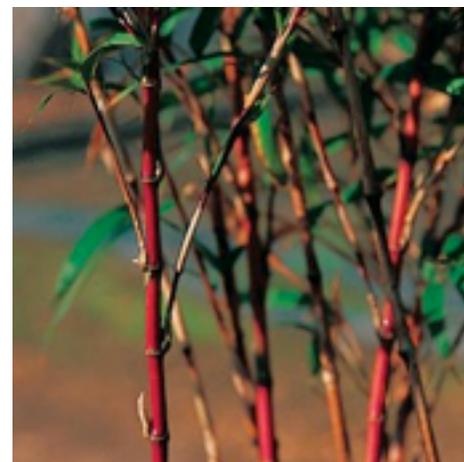
Bamboo come from moist to wet environments, in the ground any week that does not receive at least one inch of rainfall, supplemental water should be provided. In a pot, the potting medium should be a general bonsai mix suitable for deciduous trees such as Japanese Maples. Like a Japanese maple, when grown in pots, never let the bamboo get completely dry. Do not routinely grow bamboo in standing water as one might do for bald cypress. Most bamboo will die if roots are submerged for more than a week. The warning will be leaves dropping. There are exceptions, which I'll note as those species come up. Generally soil conditions good for maples will be good for bamboo.

Bamboo is a heavy feeder. Fertilize with any suitable fertilizer for bonsai, and apply it at a rate similar to the rate one uses for Japanese Black Pine. Except bamboo wants fertilizer any time the soil is not frozen. Unlike black pine there is no need to withhold fertilizer. It is important to feed while new shoots are emerging and developing, and to give a good dose of fertilizer several times in the August to October time period. The autumn is when the energy is being stored up for the following year's shoots. If you are trying to restrict growth, only fertilize from August until the ground freezes or bamboo is moved to winter storage.

Tropical species of bamboo suitable for indoor culture

Chimonobambusa marmorea - the Marbled Bamboo, Kan chiku - Japanese, Han Zhu - Chinese - this is a tender bamboo, in a pot it needs to be protected from temperatures colder than +32 F to keep leaves. (only rhizome hardy to zone 8 or +15 F when grown in the ground) for Wisconsin purposes this is a tropical bamboo. Its rhizome habit is intermediate in growth habit between running and clumping bamboo, it takes reasonably well to life in a bonsai pot. The new culms emerge yellow-green or cream and mottled with purple, or if they get some direct sun, bright red on the side in the sun. The cream

color becomes green, eventually the colors darken over the year to a solid deep purple brown. New shoots are very pretty. This bamboo is a good alternative to Black Bamboo for growing indoors. It is a small bamboo, easily kept to any height in a pot, in the ground the maximum height at 10 years would be about 6 feet, with maximum culm diameter of 1/2 inch. *C. marmorea* prefers morning sun and then dappled shade when outdoors. and should do well as an indoor plant. When indoors site it for bright morning sun, east window or south window. Culm sheaths tend to hang on, after branches are extended, it is necessary to remove some sheaths to expose more of the beautiful dark purple culms.



Bambusa multiplex - Tropical Hedge Bamboo, this is another zone 8 hardy bamboo species, it should be treated as a tropical, outdoors for the summer. The normal type form of the species will grow to a maximum of 40 feet tall, the canes will start out green and fade to a dull yellow-brown with time. The leaves are green. Fortunately there are some wonderful cultivars that are much more attractive and useful for bonsai than the normal, 'type' form of the species.

***Bambusa multiplex* 'Fern Leaf Stripe Stem'** - A very small genetic dwarf form of *B. multiplex*, with deep green leaves that are usually less than an inch long. This is a clumping bamboo, it is great for growing in pots or for bonsai. It has nice yellow culms with random green stripes and new culms blush red on the side that gets a little sun. The average height when grown in the ground is between 6 and 8 feet, it is considerably shorter when grown in a bonsai pot. Indoors it will do best with a southern exposure. Outdoors part sun to full sun will be appreciated. When growing in a pot best to protect the plant from freezing. An ideal bamboo for tropical bonsai and easy to keep any height you desire.

***Bambusa multiplex* 'Rivierorum'** - Chinese Goddess Bamboo - Bambou Déesse de Chine - French, Guan yin zhu - Chinese - Another genetic dwarf *B. multiplex* - this form the green leaves will get to 1.5 inches long on a mature plant. The culms will start green, age to yellow, then eventually yellow-brown. It is reported to be more cold tolerant than the parent species, good to + 11 F. when grown in the ground. Makes an excellent house plant. It has solid culms, rather than the normal hollow culms of the type form. Max height at 10 years in the ground is 8 feet.

Bambusa multiplex 'Alphonse Karr' - Suhou chiku - Japanese - this is not a dwarf cultivar, it can reach 40 feet tall at 10 years growing in the ground in a tropical climate. Using pruning out of the growing tip to halt culm height or using the culm sheath removal technique, or by shearing it can be maintained at any height desired. The culms are bright yellow with random green stripes and a rosy red blush. A widely available cultivar, that you will often see advertised for sale. It is an excellent house plant if you keep it pruned to acceptable size.

Bambusa vulgaris forma vitata - Painted Bamboo - often sold to tourists visiting Hawaii - this is a giant timber bamboo

capable of reaching over 70 feet in height. It does not make a good house plant, it does not take well to culture on a window sill. The beautiful golden culms with random green stripes that look hand painted are lovely to see, but this plant will not adapt to anything except maybe greenhouse culture. A possible substitute that is just as beautiful is the zone 6 winter hardy

Phyllostachys viridis 'Robert Young'.



The species of bamboo that are winter hardy in climates cooler than zone 8 do require a change of seasons, and a cool winter rest before sending out growth in spring. It is possible for bamboo in pot culture, to keep them outdoors until after a couple light frosts. Then move them indoors to a cool sunny location for the remainder of the winter. This must be done with somewhat tender bamboos, such as the Black Bamboo - *Phyllostachys nigra* and *P. nigra* 'Daikokuchiku' both will top kill at zero F, and roots should be protected from colder than +23 F. Most members of *Phyllostachys*, *Sasa*, *Sasaella*, *Indocalmus*, and *Plieoblastus* will get by with this treatment. If you can winter these with your Japanese maples or Japanese Black Pines, they will do quite well.

A couple of my favorite "Not Quite Winter Hardy Here" Bamboo Species

Phyllostachys nigra - Japanese Black Bamboo - Kuro chiku - Japanese, Zi zhu - Chinese - this is the famous black bamboo that is in very high demand. Jet black culms to 25 or more feet tall. Most nurseries can not keep it in stock. One of the reasons it is in high demand is that *P. nigra* is not a very vigorous bamboo. It does not like being a house plant. Many customers

kill their plants and keep coming back to buy another. As much as possible it should be grown outdoors. In late autumn, after a frost or two it should be wintered in a cool setting, a cold greenhouse, or an unheated sun porch. If the bamboo is in a pot, it should be kept above 23 F, above 32 F is even better, but especially at night it should be cool, less than 50 F is ideal. It won't do well in a 72 F living room. Outside it needs at least 6 hours of sun per day, up to full sun. Some shade in the afternoon during the heat of summer is helpful. Indoors it should get as much sun as possible, a southern exposure is best. It prefers a slightly acidic soil. If the water and soil are too alkaline, over time the foliage will look chlorotic. I recommend a potting media as one would use for azalea, and gardenia. Pumice, kanuma, small amount of sifted Peat moss, shredded long fiber sphagnum moss, pine bark, crushed granite, are all good ingredients. If you still have chlorosis, fertilize with 1/2 teaspoon per gallon of Ammonium Sulfate, usually available from garden centers and farm feed stores as soil conditioning fertilizer for azalea. In addition to being a fertilizer, ammonium sulfate changes the soil chemistry to a slightly more acidic range. Apply this in a separate application than your regular fertilizer. Don't mix different fertilizers in the same container, ammonium sulfate may cause precipitation of the calcium salts from the other fertilizer. The green color should return to the leaves. Many are disappointed when they start with *P. nigra*, they look at it and the canes are green. The normal progression is the canes emerge, and initially are green. As the first growing season progresses, the culms slowly darken up, blotchy black begins at the lower nodes. Then the black spreads. By the third growing season the culms will be jet black. Some plants have minds of their own, and can turn black the very first season, and some will seem to take forever to turn black. When you see a photo of black bamboo and every cane is jet black, you know that somebody cut out all the canes younger than 3 years old. For this reason, a bonsai planting of black bamboo may not be "show ready" every year, because the year you exhibit it, you have to remove all young growth leaving only mature black culms. Some years you will need to keep the young canes, to replace aging canes, until those new canes turn black, those years the planting will not be "show ready".

***Phyllostachys nigra* 'Hale'** - this cultivar tends to grow shorter than the type. At best even in the Pacific northwest it seldom tops 18 feet. It seems to be a little bit more winter hardy than the type form, though still a zone 6 plant, 4 out of 5 Wisconsin winters would not be a problem for it. Sadly that fifth winter will wipe it out. It also has a tendency to turn black quicker than the type form, sometimes by the middle of the second season the culms are completely black. In northeastern Illinois, the tallest I have been able to grow it is 10 feet, but the planting only lasted about 7 years. Then I lost my in the ground planting due to a couple bad winters in a row (a decade or more ago). I now have it again, this time in nursery pots. In a 3 gallon bucket I imagine the tallest culm will be no more than 6 to 8 feet.

***Phyllostachys nigra* 'Daikokuchiku'** - an all black cultivar of *P. nigra*, found as a sport and named by a California nursery. It is reputed to grow larger than average, to 50 feet tall and 4 inches in diameter. It has been proving to be more tender than the species form. Protect this cultivar from temperatures below + 29 F. This one is more tropical, and does not like being a house plant. Don't waste money on this one, it tends to be over priced, and in Wisconsin the type form and 'Hale' perform much better.

***Phyllostachys nigra* 'Shimadake'** - Striped cane black bamboo, Hiroshima black bamboo, Shima dake chiku - Japanese, Bambou d'Hiroshima - French
This cultivar of Black Bamboo was used frequently in the landscape around the Hiroshima area. Temples and private homes and public parks plant this cultivar. This is one of the "black bamboos" that is not black. The canes start out greenish-gray-yellow. As the culm ages the color of the culm becomes yellow-brown, with a few to many vertical black stripes. Usually by the third year the black stripes will be fairly well developed. Some plants the stripes are heavy enough to look almost black at a distance. This cultivar is thought to be more winter hardy than the type form, culms should survive -5 F, possibly a little colder. Rhizomes may be hardy down to -10 F possibly colder with good mulch layer and snow cover. Almost hardy enough to include in the "Hardy List" below. Similar is the gray-green culm cultivar, 'Henon'. I have not grown 'Henon' but culture should be the same.

***Phyllostachys nigra* 'Mejiro'** - Golden Groove Black Bamboo - I have not had this long enough to see the "magic" colors. This one wintered the 2013-2014 bitter cold, -17 F. in the ground in a 3 gallon nursery can. Completely top killed, but the rhizomes sent up a nice flush of new culms. Canes may be hardy to -5 F. Obviously at least once the rhizomes were hardy to -17 F. This one takes 3 or even 4 years to fully color up. Culms should be jet black with a yellow-gold sulcus groove. It should be quite nice, I hope it lives up to the catalog descriptions. In zone 7 this cultivar is supposed to be taller than the type, to about 40 feet. Of course in our area, 12 to 18 feet in the ground is probably maximum, and it should be easy enough to keep under 3 feet tall in bonsai culture. This is a very rare bamboo, only imported into the USA a few years ago, so nobody has a lot of experience growing it. I might in the future move it to my "Very Hardy" category. One year is not a thorough test.

Very Hardy Bamboo Species

List of species that have proven to be fully winter hardy in Zone 5 - Southeastern Wisconsin & Northeastern IL. All the following species have survived multiple years in my back yard. Note the winter of 2013-2014 was so cold, -17 F, that all these species of bamboo experienced total top kill, with 2 exceptions. *Indocalmus latifolius* and *Sasaella masamuniana albostrata* both had a good number of canes that retained all their leaves,

with nothing more than some burning around the outer edge of the leaves. These were growing in shade, received no winter sun. The *Sasaella* that got some sun during the cold did experience total top kill. Lots of new shoots from the rhizomes in spring.

Phyllostachys aureosulcata - Yellow Groove Bamboo - Ousu chiku - Japanese, - Huang cao zhu - Chinese - green culms, with a dull yellow sulcus groove. This effect is almost invisible at a distance, but up close it is a nice detail. Rhizomes are incredibly winter hardy, but the leaves can be lost at zero F. Often looks beat up by the end of winter. Leafless canes usually flush with new leaves every spring. Very reliable for hardiness. My planting bed of this species is 32 feet long by 30 inches wide. The foliage in mid summer is so dense you can not see the house behind the 30 inches of foliage. Keeps the south wall of my home cool all summer. Wood is weaker than *atrovaginata*, *bissetii*, and *nuda*. Mainly good for tomato stakes. Shoots are delicious, they do have a little bite to their flavor, so they taste different than *P. atrovaginata*. Average height 15 to 18 feet, even after a bad winter.

***Phyllostachys aureosulcata* 'Aureocaulis'** - Golden Cane Peking Bamboo - Kikankyou chiku - Japanese - this is my favorite 'fancy color' cultivar of the species. Bright yellow-gold



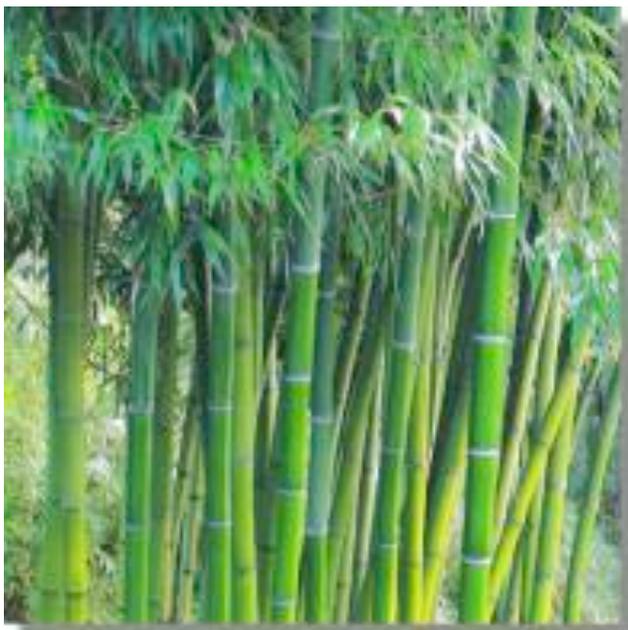
culms, often with a red blush in the sun. You can see this gold color from a distance - nice and bright. The medium green leaves contrast nicely. Remarks for hardiness, taste, height all the same as the type form. My #1 recommendation for a Wisconsin hardy golden bamboo.

***Phyllostachys aureosulcata* 'Harbin Inversa'** - Very much like the type form of the species, except the culms are yellow, pretty bright, and have many thin green stripes of different widths in each section up the cane. Often flushes red with sun. A very pretty bamboo, especially up close.

Phyllostachys aureosulcata 'Spectabilis' - Kinjougyoku chiku - Japanese, - Jin xiang yu zhu - Chinese Very similar to 'Harbin Inversa' except the green stripes on the yellow-gold culms are fewer in number. This makes it stand out more at a distance, but the full beauty of the detail is not appreciated until you are up close to the canes.

Phyllostachys atrovaginata - Incense Bamboo - Wu Ya zhu - Chinese - the best, nicest architectural upright green bamboo available for this area. Culms are very straight, rarely arch over.

My favorite green bamboo. Very cold tolerant. Little or no leaf damage most winters, culms are relatively thick for their height, giving better visual presence. I highly recommend this species for a landscape bamboo. The shoots have a very nice sweet flavor, very



tasty. Culms are strong, good wood for craft projects, even furniture. This species has a lot to recommend it. It will also tolerate being submerged, like a bald cypress would for months at a time, though it does not require this treatment. Its native habitat is secondary floodplains along rivers. Maximum height in southern Wisconsin would be about 20 feet with 2 inch diameter culms. (*P. aureosulcata* rarely gets over 1 inch caliper at the same height).

Phyllostachys bissetii - David Bisset Bamboo Hakuyou chiku - Japanese, Bai jia zhu - Chinese - bright medium green culms and leaves. Foliage very wind resistant. Comes through most winters with very little leaf damage. Max height for me has been 12 feet. In theory should be about 20 feet tall in S.E. Wisc. I have not seen it yet. (8 years or so). Recently removed this planting from my collection. Had more "plain green" than I wanted.

Phyllostachys nuda - Sheathless Bamboo - Jing zhu, or Hui zhu, or Shi zhu - Chinese, - will survive cold no problem, but needs protection from winter wind. Nice deep green with a slight blue cast to it. Leaves have a twist. Maximum height is 15 feet, after 10 years in the ground. A different texture than the

other 'green' bamboos. I no longer maintain this species, though it did well for me over 10 years.

Phyllostachys propinqua 'Beijing' - a tall green bamboo, max 18 feet in our area. very similar to *P. bissetii*. Note that only the cultivar 'Beijing' is hardy this far north, the normal type form of *propinqua* is less winter hardy. There is some belief that this cultivar will be assigned to a different species sometime in the future. I have never grown this one, but I have seen it offered frequently for this area.

Plieoblastus viridistriatus - Dwarf Green Striped Golden Leaf Bamboo - Kamuro zasa - Japanese - a more subtle beauty is hard to find. The leaves are a soft yellow with blue-green variegation, very bold contrast in spring, slowly the yellow darkens to an even light green over the summer, by autumn the stripes are subtle. Very pretty especially in spring. My planting is 30 years old. Very hardy. Frequently kills to ground, always comes back just as lush as before. Max height 2 feet. It is a running bamboo. It has appeared as a kusamono at the last three MBS shows at the Chicago Botanic Gardens. Definitely a bamboo with bonsai uses.

Indocalmus latifolius - Big Leaf Bamboo - Kattou jaku chiku - Japanese giant 4 x 12 inch leaves, heavy texture, evergreen even in coldest weather- must have shade. Does poor in full sun. In ground height at my house max 6 feet. *Indocalmus latifolius* 'Hopei' - no visible difference to the type form, except where it was collected. The leaves have a tropical look, a good texture change in the landscape, can be used as a potted plant, spending winters indoors, but a cool room or window in winter is needed. It needs a winter rest to do best.

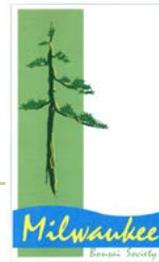
Sasa nagimontana - low growing with wide green leaves, the leaves are only a little smaller than *Indocalmus*. It is a very short plant, culms have stayed under 3 feet tall for me, an interesting ground cover. Like a *hosta* that stays green all winter. It should do well in a pot. The more commonly available *Sasa veitchii* and *Sasa palmata* are similar and often available, neither is quite winter hardy here, winter them like *P. nigra*.

Sasaella masamuniana albostrata - Dwarf White Stripe Bamboo - Furi shiia zasa - Japanese - a dwarf with vivid variegation. My plants have stayed under 3 feet tall in the ground. A wonderful bold accent plant. It is a running bamboo, fully winter hardy in southeastern Wisconsin. This may even do well into zone 4a. Even if the culms winter kill the rhizome system is very vigorous, it will come from the roots.

Remember the old saying about growing bamboo; "The first year it sleeps, the second year it creeps, and the third year it leaps".

Milwaukee Bonsai Society

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Thank you for completing this application form and for your interest in joining and volunteering with us.



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9400 Boerner Dr
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The leaves of Autumn
Purple, red and golden hues
Confetti strewn realms

Photo by Jean S

- K Ziemann