

# **Bonsai Notebook**

www.austinbonsaisociety.com

#### A Publication of the Austin Bonsai Society

#### December 2022 vol 147

### **Our News**

President's Message page 2

ABS Board Meeting Minutes page 3

Pacific Bonsai Expo Recap page 4 - 7

Club Membership Fees Increase page 8

Your Bonsai and Winter Temperatures How cold is too cold page 8 - 12

Recruiting Authors page 13

Advertisements page 14

# **Calendar of Events**

#### December

• No meetings due to Zilker Park Trail of Lights festivities

#### January 11, 2023

- Location: Zilker Botanical Garden
- Meeting begins at 7 pm
- Social starts at 6:30 pm

# 2023 Board of Directors

Jonathan W. President

Roland L. Vice President

> Eric B. Secretary

**Gloria N.** Treasurer Simon T. Member-At-Large

Jacob K. Member-At-Large

**Ever V.** Member-At-Large

## Volunteers

N/A

## President's Message By Roland L.

This is my final presidential message. Our holiday party turned out great! Thanks to Jonathan and everyone who volunteered to bring back that special ABS tradition.

We have a great program planned for you in 2023! I hope everyone will return for more fun, community, and education.

I sincerely wish all of you a happy holiday season and I hope you are spending it with people that you love.

See you next year.

Roland

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## **Official Website**

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## **ABS Library**

https://abslibrary.libib.com/



https://www.youtube.com/ channel/ UCLSknKbNLd3EOYwjkjNlneA

# **ABS Board Meeting Minutes**

Meeting starts at 7:32pm

Motion to make Elaine White a lifetime member Motion passes

Discuss budget, trending positive for the year Annual donation to TTSBE will be reinstated

Discuss proposed budget for 2023 Auction did really well in 2022. Auction should again be held offsite for 2023 Ambitious budget planned for 2023 with guest artists Proposal for monthly raffle purchases

2023 budget passes.

Discussion of holiday party food and decoration needs. E-invite to the holiday party with information on what to expect/bring. Planning to display pots created in the Isabel Glatthorn workshop at the November meeting.

Raffle for November meeting.

Board meeting planned for November to welcome 2023 board members to plan programs and learn duties. Agenda items for November meeting on future board meeting dates/times as well as food/refreshment host duties for 2023.

Auditors for 2022 budget selected.

Meeting concluded at 8:39pm

#### **Reminder for club membership and advertisement**

#### 2023 membership fee

Individual	\$35.00
Family	\$40.00
Newsletter monthly advertisements:	\$35.00
Directory advertisement:	\$11.00

You may contact payments.austinbonsaisociety@gmail.com for convenient electronic payment options (processing fee will be added).

#### Pacific Bonsai Expo Recap

by Jonas Dupuich (Bonsai Tonight) - Permission to reprint

I'm still catching up from the festivities last weekend, but I wanted to share three things related to the event before moving forward: the winners, the thank yous, and a few photos.

First up, the winning entries!

The Expo recognized six outstanding entries with the following awards.

**Best in Show**: Ponderosa Pine by Randy Knight, \$2500 award sponsored by the Golden State Bonsai Federation **Best Conifer**: Shimpaku juniper by Jeff Stern, \$2000 award sponsored by Robert Pressler, Kimura Bonsai and Landscape Nursery

**Best Deciduous**: Winter hazel by Andrew Robson, \$2000 award sponsored by Peter Tea, PTBonsai.com **Best Broadleaf Evergreen**: Chinese Banyan Tiger Bark Ficus by Jeff Stern, \$2000 award sponsored by John Kim and Michelle Hong, Joshua Roth Limited

**Best Medium Display**: Korean hornbeam and Japanese black pine by Jonas Dupuich, \$2000 award sponsored by Encinal Nursery and Jeff Stern

**Best Shohin Display**: coast redwood, Japanese quince, trident maple, Japanese maple, olive, and potentilla by Jeff Stern, \$2000 award sponsored by the California Shohin Society

You can learn about the judging process and see photos of these trees on the Expo website.



Friday night - setup complete!

### Pacific Bonsai Expo Recap by Jonas Dupuich (Bonsai Tonight) - Permission to reprint

As for the thank yous, Eric and I can't adequately convey our gratitude in a single pass so we'll be thanking early and often. To the exhibitors, vendors, visitors, volunteers, venue staff, and committee members, thank you for your contributions! If the Expo proved anything it's that such an event can't happen without the contributions of hundreds of cheerful participants working towards a shared goal: to provide a pleasant space for people spend time with beautiful trees.

We've started putting together a more exhaustive <u>list of volunteers</u> on the Expo website. I recommend checking it out and thanking anyone on this list for helping whenever you get the chance.

Over the course of the weekend I had little time to take photos, but on one pass I captured some of the trees in the first row towards the end of the day when the light turned golden. Here are some of the highlights.



Shimpaku juniper by Jeff Stern

## Pacific Bonsai Expo Recap by Jonas Dupuich (Bonsai Tonight) - Permission to reprint



Yatsabusa corkbark elm by Ryan Neil



Cork oak by Michael Roberts

#### Pacific Bonsai Expo Recap by Jonas Dupuich (Bonsai Tonight) - Permission to reprint



Winter hazel by Andrew Robson



Shimpaku juniper by Boon Manakitivipart

Before signing off, I wanted to mention a fourth item by answering a question that's come up a lot this week: yes, we're planning to do it again!

Eric and I are currently hard at work planning for the next Expo, currently slated for **Fall, 2024**. If you have suggestions for what we can do better next time, feel free to let us know in the comments below.

#### Your Bonsai and Winter Temperatures: How Low Is Too Low? by J. R. (Bill) Cody

When the subject of over-wintering our bonsai in Central Texas arises, the primary question is: Just how cold a temperature can our bonsai tolerate. To help the guessers, I compiled the results of three studies that have appeared in the horticultural literature, which are designed to aid commercial nurserymen protect their stock during the winter (table 1).

Some species that are native to our bonsai culture do not appear, but I believe that there is enough information for us to make a more educated guess as to where to "red-line" projected greenhouse/cold-frame low temperatures as we overwinter our bonsai. See Figure 1.

Compare the ambient temperature with that inside the clay root ball near the center of the container—they are essentially equivalent. The slightly lower temperature of the containers sitting on the ground is likely due to their position - four feet lower and colder air sinking to the floor, there being no advantage from ground heat. I believe that this information can be easily extrapolated to fit the weather patterns in other parts of the State.

Table 1 - A compilation of average root killing temperatures (Fahrenheit) for some woody plants. All temperatures are killing temperatures except the third column that lists minimum safe temperatures for that species. The values in columns one and two for "immature" and for "mature" roots are combined from two sources. Note that of the 21 species in which a "minimum safe" vs. a "killing" temperature is known, that the average difference is only 4.71F.

#### Reminder: 2023 CLUB MEMBERSHIP FEE AMOUNT INCREASE

Beginning in January 2023, ABS will charge an annual membership fee of \$35 for an individual and \$40/couple pursuant to the vote taken by the ABS Board on May 17, 2022, the discussion by attendees at the June 22 ABS meeting, the newsletter announcement dated June and July, 2022 and the regular meeting vote taken on July 13, 2022. Fees for electronic payments will be added to those amounts.

Memberships are annual and need to be renewed each year by the end of February in order to receive a copy of the 2023 Directory.

### New/Renewed Members

Lyon 0.

Name of Plant	Туре о	Type of Roots		Temperature	
	Immature	Mature	Min. Safe	Killing	
Acer palmatum 'Atropurpureum"			17	14	
Acer pseudoplatanus	4	-5			
Buxus sempervirens	27			15	
Cornus florida	21	11	24	20	
Cotoneaster horizontalis	20 C		22	18	
Cotoneaster adpressa var. praecox			20	16	
Cotoneaster conjesta	19	-1			
Cotoneaster dammeri	23 to 10	-1			
Cotoneaster dammeri 'Skogholmen'	19				
Cotoneaster microphyllus	25	9			
Crytomeria japonica	(c) (n) (n)		20	16	
Cystus x praecox			20	15	
Daphne cneorum			24	20	
Euonymus alata 'Compacta'	19	7			
Euonymus fortunei 'Carrierei'				15	
Euonymus fortunei 'Colorata'			10	5	
Euonymus fortunei 'Graciles'				15	
Euonymus fortunei var. vegetus	23 to 16	12 to 3			
Euonymus kiautschovica	21	16			
Hedra helix 'Baltica'				15	
Hypericum spp.	23	18			
Ilex 'Nellie Stevens'	23	14			
llex 'San Jose'	21	18			
llex cornuta 'Dazzler'	25	18			
llex crenata 'Convexa'			24	20	
llex crenata 'Helleri'	23 to 19	5			
llex crenata 'Hertzii'			24	20	
Ilex crenata 'Stokesii'	/		24	20	
llex glabra	15 da - 17			15	
llex opaca	23	9	24	20	
llex x meserveae 'Blue Boy'	23	9			
Juniperus conferta		9		15	
Juniperus horizontalis	6 az			0	
Juniperus horizontalis 'Douglasii'	8 m - m		10	0	
Juniperus horizontalis 'Plumosa'	12 to 12	-4 to -2	10	0	
Juniperus squamata 'Meyeri'	12	-2			
Kalmia latifolia	16				
Koelreuteria paniculata	16 to 16	-4 to -5			
Leucothoe fontanesiana	19			5	
Magnolia stellata	21	9	26	23	
Magnolia x soulangeana			26	23	
Mahonia bealei	25	12			
Pachysandra terminalis				15	
Picea glauca				-10	
Picea omorika				-10	

Pieris floribunda				5
Pieris japonica	16		15	
Pieris japonica 'Compacta'				15
Potentilla fruticosa				-10
Pyracantha coccinea 'Lalandei'	25	18	22	18
Rhododendron 'Gibraltar'				10
Rhododendron 'Hino-crimson'	19			
Rhododendron 'Hinodegiri'	19			10
Rhododendron 'Purple Gem'	16			
Rhododendron (Exbury Hybrid)	18	3		
Rhododendron (P.J.M.Hybrids)			10	0
Rhododendron carolinianum			15	
Rhododendron catawbiense		3	15	
Rhododendron prunifolium	19			
Rhododendron schlippenbachii	16			
Stephanander incisa 'Crispa'	18	0		
Taxus x media 'Hicksii'	18 to 17	-4 to-5		
Taxus x media 'Nigra'	1		15	10
Viburnum carlesii			20	15
Viburnum plicatum forma tomentosum	19	7		
Vinca minor				15

#### Winter Root Tempatures in Containers Inside an Enclosure



10

Figure 1. These temperatures were taken during February 2003 within a double-walled room with a woven plastic "insulator blanket" top. The trees were misted using an electronic leaf to activate the misting. The soil thermometer was inserted into the clay root balls of Ashe junipers collected in January and February of 2003. The thermometer was inserted four inches into the growth medium and root ball, making the end of the thermometer about four to five inches from the surface upon which the container was sitting - essentially in the center of the root ball. The "shelf" temps were taken in containers on a shelf four feet from the ground. "Ground" temps were containers sitting on the ground inside the room, and the third group temps were taken in containers buried in a bed of sand, beneath which was an 800 watt system of heating coils. The thermostat was set at 77F.

Since cold hardiness varies among species, between cultivars of a species, and even between various tissues of the same plant (e.g., crown and roots), 1 it is no wonder that there may be confusion as to how to protect our bonsai against the rapidly changing, many faces of Central Texas weather. Temperate zone woody plants develop 'cold-hardiness' in response to declining photoperiod (light) and thermoperiod (heat) as the shorter days and longer nights of fall approach. The temperature reduction brought on by cool days and cooler nights contribute to root hardiness by slowing or stopping root growth. However, since temperatures above 60F. tend to slow this hardening process, I'm sure you can appreciate the quandary we face as our plants confront the bouncing-ball daily temperatures of Central Texas. We place our bonsai in enclosed structures to protect them from that surprise blue-norther that is coming through tonight, only to have the enclosure's ambient temperature reach 70F. the next day even during the dead of winter.

There are two types of cold injury to plants and plant roots: Freezing and chilling. In the case of freezing, damage to the roots occurs when ice particles form within the root cells (intracellular water), causing the rupture of cell membranes that is a lethal injury. This type of injury is generally the result of a sudden, rapid fall in the temperature. Ice particles may also form in the water outside the cells (extracellular water). This is a non-lethal and common occurrence in many plants during the winter. However, this phenomenon may result in damage to cells by shifting intracellular water into the extracellular space, causing cell dehydration with resulting cell damage.

Chilling injury occurs when a susceptible plant, especially tropicals, is subjected to temperatures that are actually above freezing. Cooling of the root system and increased viscosity of extracellular water within the plant, as well as changes in the cell membranes between the extracellular and intracellular spaces, interferes with the entry of water into the vascular system. These changes reduce the ability of the plant to move water from the roots to the plant's tissues at the same rate at which water vapor is being lost into the atmosphere - a desiccation injury ensues much like the wind-chill injury we see during winter windstorms.

Root systems can become acclimated (more resistant) to chilling conditions. Studies show that increased cold hardiness of the root system is related to the degree of unsaturated fatty acids in the membranes of the roots. Increased unsaturated fatty acids result in more rapid water transport through the root tissues at lower temperatures. Phosphorus nutrition seems to be important for root hardiness.

As was mentioned, there is a difference in the cold hardiness of the top of the tree versus the root system. Old roots are hardier than new roots and the latter seem to be unable to acclimate themselves despite the changes in temperature and light of approaching fall. As might be expected, this year's rooted-cuttings are less able to withstand over-wintering than plants that have spent the previous year in one-gallon containers.

Studies show that similar protection is offered root systems of container plants whether they are over wintered in white or clear plastic enclosures—either single- or double-walled. White plastic sheeting for your winter enclosure is of greater value in reducing the accumulation of heat during sunny winter days than clear plastic. Temperatures of 40F above

outside temperatures have been recorded inside single-wall clear plastic enclosures and the temperatures were higher when there is a double wall. Double-walled white plastic is the most effective in reducing mid-day heat accumulation. The capability for the ventilation of these enclosures is imperative in those regions which have labile winter temperatures.

The temperatures within containers exposed to high or low ambient temperatures for long periods of time, i.e., all day or all night, eventually approach that of ambient. In February 2003 there were two mornings that the temperature was 23F. Each morning the temperature in all four of the containers was 23F. For this reason the time-honored practice of placing bonsai beneath their respective benches for the winter may not be as safe as we are led to believe. Obviously, the hardiness zone in which one resides and species of plant must be taken into account, but Figure 2 should give the reader some idea of the safety of this practice in his/her back yard.



#### Winter Container Temperatures Outside

Figure 2. Three large, four inch deep ceramic containers were filled with sharp sand. Two were covered with wind-proof material; the third was not. All had two thermometers inserted two inches deep and two inches from the edge of the container. All were set upon the ground with a northern exposure but without overhead cover. Readings were taken at 0700 CST. On mornings that the wind was 20-30 mph, there would be a 2-3 degree colder temperature in the unprotected container, otherwise all temperatures were equal to or +/- one degree of the ambient reading.

References: Newman, S. E., Root Stress in Containers, Proceedings of the International. Plant Propagation Society, Vol.36:384. 1986.

Good, G. L., et al, Winter Protection of Containerized Ornamental Plants, J. Arboriculture, Vol.2(3):51. 1976.

Ingram, D. L., et al, Effect of Heat Stress On Container-Plants, Proceedings of the International. Plant Propagation Society, Vol. 39:348. 1989.

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# **Recruiting Authors**

With a nod of respect to John Miller, who has been diligently writing monthly columns for our newsletter, we would also like to take this time to invite interested members with knowledge and experiences of local Austin conditions to write articles for beginners and potential aspirants keen on raising bonsai. The Bonsai Notebook is looking for a new voice to author a column providing helpful reminders and tips dedicated to caring for bonsai. Be it a monthly routine or winter procedures, we'd like to welcome new perspectives and experiences to be shared in this newsletter. If interested, please contact: webmaster.austinbonsaisociety@gmail.com.

A warm thank you to John Miller for writing the latest columns. Even I, as the editor, may have taken these last months for granted and have been reminded that life is a charming companion that deserves to be appreciated every day. Thank you for your helpful words!

# **Advertisements**







# Bonsai Notebook

Austin Bonsai Society P.O. Box 340474 Austin, Texas 78734



# Austin Bonsai Society

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# About Us

The Austin Bonsai Society is a nonprofit organization which exists to help in providing guidance and education for individuals in their desire to learn and expand their knowledge and skill in the arts of bonsai.

The Society holds regular meetings, twelve months a year, on the second Wednesday of each month. Our social period begins at 7:00 pm, followed by our program at 7:30 pm. Normally, unless announced otherwise, these meetings are held in the Zilker Garden Center building, located on Barton Springs Road in Zilker Park, Austin, Texas. We offer a monthly program of interest to the general membership.

The cost of membership is presently only \$32.50 for an individual and \$37.50 for a family membership. For additional information, contact the Austin Bonsai Society at P.O. Box 340474, Austin, TX 78734.