

ARBORNOTES

A Newsletter of the Arboretum Associates

December 2015



PLEASE VISIT

OUR WEBSITE AT

www.uidaho.edu/arboretum

Inside this Issue

Lilacs in the UI Arboretum	1-3
Idaho Trees going to Harvard University	4-5
Updates for the Arboretum Association Advisory Board	6-7
Arboretum Associates Donor Roll	8-9
Report from the Horticulturist	10-11
15th Year of 'Summer Breezes and Sweet Sounds' in the Arboretum	12
Arboretum Associates Plant Sale	12
Science Saturdays in the Arboretum	13
Scavenger Hunt	14
Mountain Pine Beetle in Shattuck Arboretum	14-15
Upcoming Events	15

Lilacs in the UI Arboretum

To discuss lilacs with Richard Naskali is no simple conversation. The sweltering May afternoon I spent doing so was, instead, an adventure that meandered across topics from genetics to etymology to botany, and Dr. Naskali's childhood. At times launched into narratives that departed from lilacs for long stretches of time before finding it's way back.

I learned that the story of lilacs spans the world. I learned that the white outlines on one of my favorite purple lilacs are the result of a mosaic, or two genetically different tissues combining to form one 'sensation' flower. I learned not to confuse botanical variety with cultivar, and the correct way to punctuate such a name.

I left with a greater appreciation for a complex and beautiful plant that is central to the University of Idaho Arboretum and Botanical Garden -- and for a complex and interesting human whose passion for botany has shaped the Arboretum and its lilacs for decades.

The Arboretum was first planted in 1982, but the story of its lilacs begins on a rainy April afternoon in 1987, when Arboretum supporters and members of the Idaho State Federation of Garden Clubs met to plant the U.S. Constitutional Lilac Grove in honor



Photo of Asian Lilacs (*Syringa vulgaris*)

Paul Warnick photo

Come Grow With Us

ArborNotes

A Newsletter of
the Arboretum Associates
University of Idaho
Arboretum and Botanical Garden

Published by
ARBORETUM ASSOCIATES
University of Idaho
875 Perimeter Drive MS 3143
Moscow, Idaho 83844-3143

President
Maureen Taylor Regan

Vice-President
Kris Roby

Secretary
Amy Ross-Davis

Treasurer
Joy Fisher

Past President
Jan Leander

Members-at-Large
Bill Bowler
Sally Greene
Dan Johnson
Ron Mahoney
Dave Tank

Arboretum Horticulturist
Paul Warnick
875 Perimeter Drive MS 2281
Moscow, ID 83844-2281
Phone: (208) 885-5978
arboretum@uidaho.edu

Emeritus
Arboretum Director
Richard J. Naskali
615 N. Eisenhower St.
Moscow, ID 83843
Phone: (208) 882-2633
naskali@uidaho.edu

DECEMBER 2015

of the 200th anniversary of the Constitution's signing. Lillian Pethel, a garden club leader and a key player in the arboretum's early days, presided over the planting of 23 French lilacs along with Naskali, UI President Richard Gibb and state federation president Louisa Cone.

The Constitutional Grove features primarily *Syringa vulgaris*, commonly called French lilac. Hungarian and French lilacs are native to Europe, though Naskali is quick to point out that "French" is a misnomer. These lilacs are not originally from France, but a French family, the Lemoines (father Victor, mother Marie Louise and son Emile), shaped the variations through aggressive hybridization. They developed multiple color variations and popularized the double-flowered lilacs. Among the Arboretum's collection are the fragrant white cultivar 'Mme. Lemoine.'

The Lemoines developed dozens of cultivars, which Naskali points out is still just a small slice of the incredible array available worldwide.

"Today in the world, and mainly in the Northern Hemisphere, there are at least 1,800 cultivars of lilacs of various sorts," he said. "And they're still making them."

Another of Naskali's favorite lilac hybridizers is the late Father John Fiala, a Roman Catholic priest from Ohio, who wrote a major book about lilacs (Naskali's annotated copy now lives in UI's Stillinger Herbarium). A number of Fiala's cultivars, including his famous large-blossomed 'Wedgewood Blue,' grow in the Arboretum.

The Arboretum is also home to numerous Asian lilacs. Among them are several *Syringa prestoniae*, or Preston lilacs, a cross of two Chinese species created by the intrepid Canadian breeder Isabella Preston, whom Naskali appreciates for her forward thinking in developing cold-tolerant cultivars.

"She was merely an ag tech, but became world famous for the radical things she did," Naskali says. He notes her 'Miss Canada,' a bushy pink lilac near the Arboretum kiosk, as among his favorites.

The Arboretum also houses Korean lilacs, the origins of which also hold an unusual story. For generations, the Korean lilac was largely unknown to most of the world. But when a botanist became stranded at a Seoul train station, he collected seeds and began to spread them to Europe and North America. For a while, all the Korean lilacs in the world came from that collection, Naskali says.

Several of the Arboretum's Asian lilacs (especially those clustered near the kiosk) came to UI via Harvard's Arnold Arboretum, home to one of the best lilac collections in North America. In the mid-1990s, Harvard, the University of Pennsylvania and the U.S. National Arboretum bankrolled trips to collect seeds of native plants from the mountains around Beijing. Using gift money from the Arboretum Associates and himself, Naskali worked with Arnold Arboretum to receive seeds, including lilacs, from these trips. The plants were started and cared for at a nursery in Lewiston, and now are denoted in the UI Arboretum with the letters "HLJ," for Heilongjiang Province, on their bronze tags and BJG for mountains around Beijing, China.

This expansive variety of lilacs – more than 130 cultivars from around the

globe, according to the 2013 Arboretum inventory – is “important for an arboretum and botanical garden to have,” Naskali says.

And anyone who talks with Dr. Naskali knows his opinions about arboreta are not only passionate, but grounded in a life of dedication to botany that began when he was a shy, impoverished boy from Ashtabula County, Ohio, who loved flowers instead of sports. After dedicated teachers led him to earn bachelor’s, master’s and doctoral degrees from Ohio State, Naskali joined UI’s newly formed Department of Biology in 1967 and immediately took an interest in the diversity and care of campus plantings.

Naskali was instrumental in the early group that met on nights and weekends in the 1970s to discuss what the Arboretum should be and gathered donations to bring their dream to fruition. The Regents accepted the master plan in 1980, and the first plants went into the ground on Easter Sunday 1982. Naskali became Arboretum coordinator not long after, and then Arboretum director.

“I did everything from supervising students to mowing, planting, and raising funds,” he says.

He retired in June 2003, but has maintained a presence at the Arboretum, on campus and in the community. He also maintains an encyclopedic knowledge of the Arboretum, its plants and its stories, along with a fierce sense of devotion and pride.

Back in 1987, when the Constitutional Lilac Grove was planted, Naskali told the *Idahonian* newspaper that he wanted the Arboretum to be known for its lilacs.

“Ten to 20 years from now the grove will be the best of the lilacs in the West,” he said.

And now, nearly 30 years later, the families, students and community members who wander through the Arboretum in spring, catching the scent of ‘Sensation,’ resting beneath the shade of the ‘China Snow’ Peking lilac, or examining the pale-pink flowers of ‘Krasavitsa Mosky’ (“Beauty of Moscow”) can agree: it is.

—Tara Roberts



View of lilacs looking westward across pond.

Paul Warnick photo

Idaho Trees Going to Harvard University

Harvard University's Arnold Arboretum recently began a ten year plan to add to their collections. One of the areas that they felt needed to be strengthened is trees and shrubs native to the Western United States. A committee formed a list of species they felt should be added to their collections, and a number of those species grow in Northern Idaho.

Kyle Port is the Manager of Plant Records for the Arnold Arboretum. He grew up just outside Pullman, Washington, attended Washington State University and earned a degree in Horticulture. After graduation he did an internship at the Arnold Arboretum, and while he was there the position of Plants Records Manager opened up and he was hired. He has now been there for 18 years. Since Kyle grew up exploring the forests of Northern Idaho and he still has a local 'home base', he was selected to begin the collections of Northern Idaho species for the Arnold Arboretum.

Collecting a wide range of woody plant seeds has several challenges, the first is finding the species. That is generally relatively easy, but finding plants with ripe seeds that are accessible is more difficult.

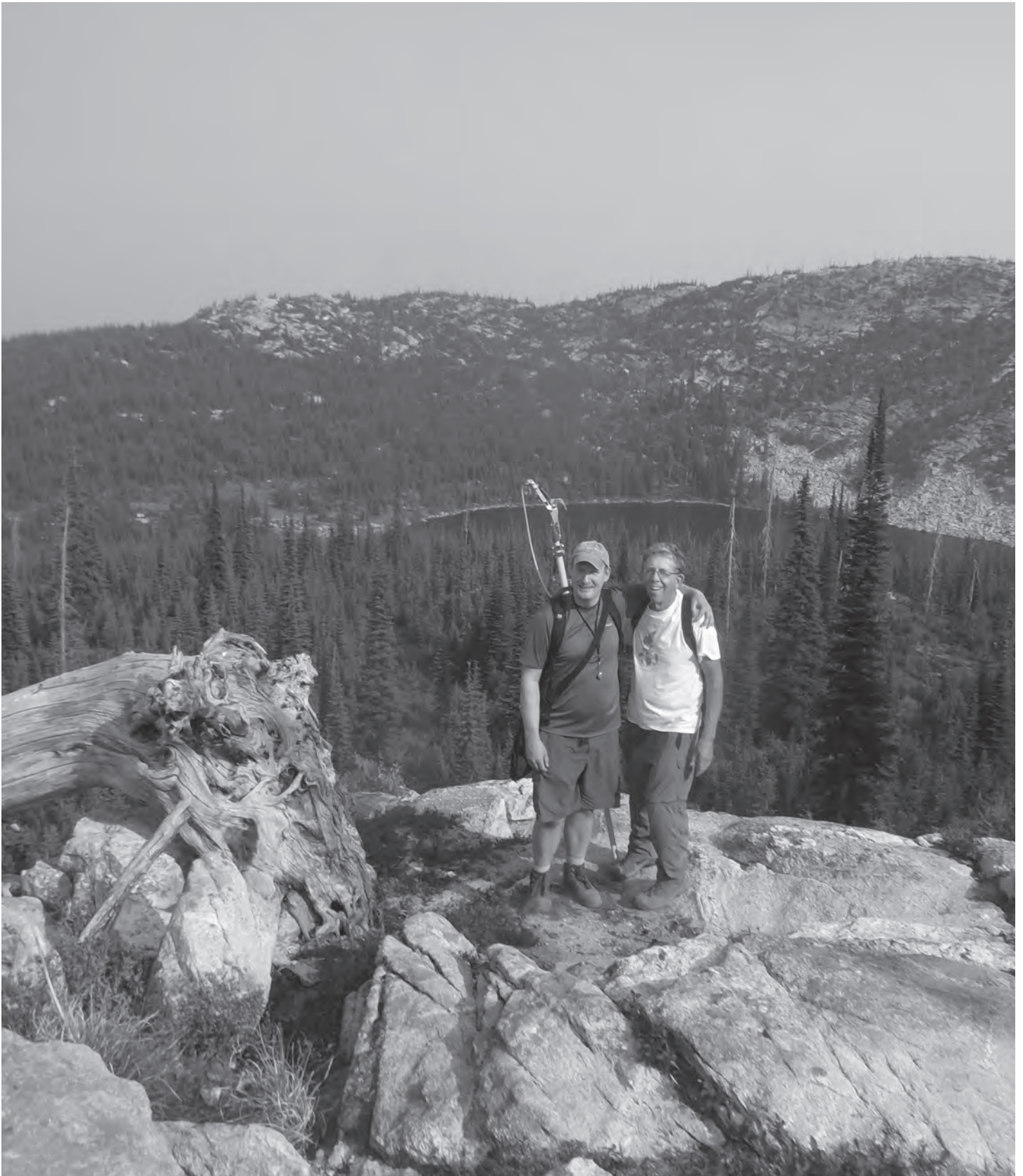
I was invited to participate in as much of the trip as I could. Kyle scheduled his trip for two weeks in late August, just as the local wild fires were erupting and smoky conditions made outside activities unpleasant. I decided to go along for two days of the trip, taking advantage of an opportunity to see a new part of Idaho and a tree species I had not seen before in the wild. Our primary goal was to find seeds of the Alpine Larch, *Larix lyallii*. According to Frederic Johnson in his book 'Wild Trees of Idaho', there are only two places in Idaho that are accessible by road that you can find this species. "Accessible by road" turns out to be open to interpretation, as we hiked about four miles round trip to reach the upper lake and find the accessible tree. One of those spots is at the Roman Nose Lakes in the Selkirk Mountains north of Sandpoint. Kyle, his father, David Port and I set out from Bonners Ferry, Idaho on August 27, which turned out to be the worst smoke day in Moscow (all outdoor activities on campus were cancelled), but surprisingly the smoke was not bad where we were, even though we were fairly close to a major fire. We were

distracted on the drive up to the trailhead to the lakes collecting several other species along the way and watching the biggest bull moose I had ever seen. We ended up pushing darkness a little bit by the time we hiked out. But, somewhat surprisingly, we were able to find the trees and a couple of them had cones within reach of the pole pruner Kyle packed up the mountain. The seeds of Larches drop out of the cones before the cones drop, so, we had to find cones on the tree that we could reach and that still had seeds.

The next day we made a big loop out in the mountains east of Bonners Ferry and up to the Canadian border. We were able to find many of the plants on their 'wish list', and I believe that after his full two weeks, Kyle found everything they had on the list except for White Bark Pine, *Pinus albicaulis*. We were able to find the trees along with the Alpine Larch at Roman Nose Lakes, but none of the trees we found had cones.

For all of the species we collected, we also collected foliage and stems that Kyle pressed and shipped back to the Arnold Arboretum where they will be officially identified and made into herbarium specimens. The seeds go to their greenhouse grower, who will attempt to germinate them over the next year. If they are successful and end up with more plants than they can use, they will share them with other arboreta. I told Kyle I would like to get some of the Alpine Larch. We did have three of them in the collection, but they were never happy in their location and eventually died. I would like to try again in a couple of other locations to see if we can get this rare Idaho native to grow in Moscow.

— Paul Warnick



Kyle Port with his father David Port 8-26-15

Paul Warnick photo

2015 News/Updates from the Arboretum Associates Advisory Board

Greetings, Arboretum Associates members, patrons, and fans/users of the Arboretum. As 2015 draws to a close, I wanted to take this opportunity, on behalf of the Arboretum Associates advisory board members, to update you on some of the items we have been focusing our attention on during this past year.

First, as you may recall from the January 2015 ArborNotes issue, the Arboretum Associates board has been involved in a concept development plan for the Arboretum to be more directly connected/showcased with the main campus corridor over a long-term plan. This started as a plan to better define and showcase the north entrance of the Arboretum, but expanded tremendously in scope to look to the future of the Arboretum as an integral part of the core campus. In working with **zimmerray studios** of Seattle, we have now commissioned three artists' renderings to show general concepts that may be shared with

constituent and stakeholder groups across campus and in the community. Ray Pankopf, UI Director of Architectural and Engineering Services, is serving as the liaison with **zimmerray studios** and reports that the renderings are being tweaked and modified subsequent to feedback from our group. There is also a slide show presentation being developed by **zimmerray** that will provide further concept clarification on this "Arboretum Initiative 2015." We are hoping to review drafts of both of these items in the next few weeks. Once they are "finalized" (I should probably use that term very loosely), we are eager to get input from all of you on these concepts. We're thinking the Arboretum Associates annual meeting in April could be a wonderful venue for a "town hall meeting" on these ideas, so stay tuned!

There are also developing plans to add a gazebo to the Arboretum. This idea was requested by a UI alumnus who would also be providing the private funding of the project. Again, Ray Pankopf is providing the lead on this. In mid-October representatives from various constituency groups (Arboretum Associates, Arboretum Executive Committee,



Site for new gazebo.

Paul Warnick photo

UI Facilities) met with Ray and a local architect to do some potential site analysis. We were looking at the open turf area between the two ponds. The space is where the Asia, Eastern North America, and the Europe plant geographies meet. That in itself presents all sorts of great ideas as to what kinds of plantings would go along with the gazebo to continue those geographic themes. Ray has since contracted with this architect firm and expects some information to share with our board by mid-December. This gazebo could not only be beautiful in this gorgeous Arboretum setting, but could be multi-functional. More news to come on this, too, as plans develop.

Then the third item I'd like to mention is that FINALLY there will be three directional signs pointing the way to the Arboretum from Highway 95 south coming into town. Two will be facing both directions along the highway and one will be located on Palouse River Drive. Thanks to Brian Johnson, UI Vice President for Facilities, revisiting with city officials, we got permission to proceed with the signage. Ray Pankopf has contacted the sign vendor he works with and will share the draft versions with our board when they are ready.

So, I just wanted to keep you all informed of several items that will be positive enhancements for the Arboretum. Happy Holidays!

— Maureen Taylor Regan, President
Arboretum Associates Advisory Board



View of ponds from proposed gazebo.

Paul Warnick photo

Arboretum Associates Donor Roll

Thank you to the many generous donors who supported the University of Idaho Arboretum and Botanical Garden from July 1, 2014 to June 30, 2015. A total of \$29,642 was received from membership gifts, gifts for endowments that support the Arboretum, and gifts to support specific Arboretum projects. Your support makes a difference.

Life Associates

Elna & Elbert Barton
 Judi Beck & Tom Alberg
 Bert Bowler
 Ben Bowler
 Wilma & Edd Bowler
 John Burlison
 Ronald Carlson
 Sharon Christoph & Christopher Davidson
 Roberta & Charles Graham
 Alma & David Hanson
 Patricia Jordan
 Jean & Roger Korus
 Jan & Dick Leander
 Norma Lewis
 Louise Luce
 Makiia & Chris Lucier
 Judith Marineau
 Luz & Albert Merkel
 Moscow Rotary Club
 Richard Naskali
 Marcia & Rob Parish
 Raven Trust Fund
 Teita & Tom Reveley
 Melissa Rockwood
 Nancy & Garth Sasser
 Maguerite Smiley
 Ruth & Myrl Stearns
 Robert N. Steele
 Jeanne & Ray Steinhoff
 William Stellmon
 Ellen Thiem
 Gene Thompson
 Lauren & David Wenny
 James White
 Doris Williams
 Jaki Wright & Bill Bowler

Fiscal Year 2015 Membership Gifts

Life Associates

Elbert & Elna Barton
 Ronald Carlson
 Alma & David Hanson
 Albert & Luz Merkel
 Thomas & Teita Reveley
 Ellen Thiem
 David & Lauren Wenny

Sponsor

Walter & Elinor Hesford
 David & Rebecca Knapp
 Judith Marineau
 Northwestern Mutual Life
 Foundation, Inc.
 Eugene Thompson
 Phyllis & Dean Vettrus

Patron

Edd & Wilma Bowler
 James & Lucinda Fisher
 Christine & Terry Gray
 Cindy Johnson
 Richard & Marlene Johnston
 Christopher & Makiia Lucier
 Gwen & Kenneth Mitchell
 Darla & David Port
 Shirley Rencken
 Donna Vincenti
 Barbara & Richard Wells

Donor

Diane Armpriest
 Laurie Austin
 Roger & Alane Blanchard
 William & Jacqueline Bowler
 Warren Bowler
 Donald & Karen Burnett
 James & Susan Calvert
 Janet & Alton Campbell
 Linda & Duane Char
 Lawrence & Karen Chinn
 Mary Clancy
 Gail & Mark DeSantis
 Robert & Anne Dwelle
 Joy & Douglas Fisher
 John & Barbara Foltz
 Chandra & James Ford
 Mary & Archie George
 Karla Harman
 Willard & Ann Harwood
 Thomas & Alice Hennessey
 Herron DuPree Fund
 Charles & Andrea Horgan
 Mary Ann & John Judge
 Larry & Joanne Kirkland
 Eva & Kim Kirkland
 George & Joan Klingler
 Walter & Betty Kochan
 Betty & Walter Kochan
 Michael & Martha Kyte
 Thomas & Carolyn Leege
 Corinne Lyle
 Joan McDougall
 Ronald & Georgia McFarland

Barbara McKean
 Lawrence & Marjorie O'Keeffe
 Beverly & Steven Poole
 Beverly Rhoades
 Susan Roberts
 Florence & Lorin Roberts
 Dan & Martha Schmidt
 Martha & Dan Schmidt
 Elisabeth Shepard
 Philip Shinn
 David & Katherine Spencer
 Nancy & William Sprague
 Robert N. Steele
 Robert W. Steele
 Joanne Sutton
 Kathryn Swenson
 Maureen & Donald Taylor Regan
 Martin & Julia Trail
 Suzanna & David Trail
 UII Retirees Association, Inc.
 Steven & Mary Ullrich
 Donald & Gladys Weisenstein
 Cathryn Willmes

Sustaining

Anonymous
 Louise Avery
 Elisabeth Berlinger
 Carol Blackburn
 Nilsa Bosque-Perez
 Elizabeth & Thomas Brandt
 Caroline Christenson
 Lois Clifton
 Steve & Sally Davidson
 James & Kathryn Dunn
 Mary Fisher
 Tonie Fitzgerald
 John & Sandra Goffinet
 Ronald & Iris Hurlbert
 Roger & Jean Korus

Diane McKenzie
 Nancy & Reid Miller
 Ann & John Norton
 Anne & Scott Raunio
 Roger & Carise Rowley
 The Schwab Charitable Fund
 Thomas & Jeanette von Alten
 Henriette & Wayne Westberg
 Gerald Wright
 Elisabeth Zinser

Active

Lois Bellis
 Teresa Boykin
 James & Misty Cash
 Anna & Paul Conditt
 Margaret Conrad
 Brian Dulin
 Eloise Frank
 Anne & Philip Frederiksen
 Candida Gillis
 Rebecca & Patrick Hayes
 G.N. Kumar
 Jacob & Kiz Leppert
 Christine Mallon
 Cynthia Muskat
 Frances Norton
 Patricia & James Peek
 Annette & Roger Pettenger
 Cynthia & Kenneth Piez
 Jan & David Rauk
 Marina Savenkova
 Virginia Snyder
 Susan & Chuck Strout
 Jeanette Talbott
 Robert & Brenda Tribelhorn
 M. Vasundhara
 Diane Walker
 Susan Zenier

Gifts in Support of Projects

Eric Anderson
 Mollie & Benjamin Beckler
 Kenton Bird & Gerri Sayler
 Warren Bowler
 Robbin Bowler
 City of Moscow
 Wilma Daniels
 Winifred Dixon
 Max & Carla Eiden
 Linda Engelhardt
 Jodi & John Haire
 Robbi Hamida
 Donna Hanson
 Cynthia & Edmund Hsieh
 Carole Hurley Hughes
 Harriet Husemann
 Birgitta Ingemanson
 Willemina & Kenneth Kardong
 Vicky & Benny Ko
 Marilyn Meiners
 Gordon & Alice Merritt
 Moscow Garden Club
 Sandra Navarro
 Joyce & Duane Parr
 Plants of the Wild
 Susan Roberts
 Nancy & Garth Sasser
 Ray & Violet Sawyer
 Maureen & Donald Taylor Regan
 Valley Garden Club

Gifts to Arboretum Endowments

Alfred & Bonnie Janssen
 Shawna Lindquist
 Robert N. Steele
 Elisabeth Zinser

Report from the Horticulturist

Sometimes it seems that most of my time is taken up with struggling to keep the irrigation systems running, the lawns mowed, and weeds as under control as possible. But, then I get to write this report and reflect back on the things that we have been able to accomplish in between the routine maintenance activities.

We added two new ‘collections’ to the Arboretum this year, Eastern North American Hydrangeas and Native Roots, a newly developed group of Western North American native wildflowers selected for their ability to be used in ornamental landscapes.

There are two species of Hydrangeas native to the Eastern United States. They are the Oak Leaf Hydrangea (*Hydrangea quercifolia*) and Smooth Hydrangea (*Hydrangea arborescens*). Although neither of these species have the range of colors or size of blooms of the Mop Head Hydrangea (*Hydrangea macrophylla*), they are much more reliably winter hardy here in Moscow. We planted 24 plants of 16 different cultivars of the two species towards the southern end of the Eastern North American section. The cultivars all exhibit some distinctive growth habit, foliage color or flower color. All of them are summer bloomers and the Oak Leaf Hydrangea has the added feature of showy burgundy fall color.

The native wildflowers are a new group of plants known as Native Roots developed by Dr. Steve Love at the Aberdeen Extension site in southern Idaho. Dr. Love has been working since 2008 to develop a line of native wildflowers that can be cultured from seed and still produce a consistent,

uniform plant in a landscape. This year, the first releases from that research were made, and ‘Plants of the Wild’, a native plant nursery in Tekoa, Washington, is one of the nurseries licensed to produce and sell the plants. They generously donated some of each of the 32 different species and cultivars to the Arboretum and we planted them in a display on the north end of the Xeriscape Garden. Kari Clausen, a University of Idaho Horticulture student who was hired as a summer worker in the Arboretum, took the Native Roots project on as her internship project. She has done an outstanding job arranging, planting and caring for the new plants. Of the more than 200 new plants there have only been a couple of casualties and some of all the species have grown and flowered. And perhaps most amazingly, with only a little help from the rest of the crew, she has managed to keep the space essentially weed free!

Several years ago the campus grounds department started a project to propagate some of the significant memorial trees around campus. The thinking is that if something were to happen to the original tree, it would be nice to have a ‘clone’ of the original still on campus. One of the trees that was selected was the ‘Teddy Roosevelt’ Colorado Spruce which was planted by President Roosevelt on April 10, 1911. Several grafts were made from the original tree and this spring those young trees were planted out on campus. There were enough trees available that one was given to the Arboretum and we planted it alongside our other Colorado Spruce in the lower part of the Arboretum on April 22, 2015, 104 years after the original tree.

Trying to maintain the ponds continues to take way more time than it should, with less than satisfactory results. We



Irrigation installation

Paul Warnick photo



Graft of ‘Teddy Roosevelt’ Colorado Spruce

Paul Warnick photo

did purchase a new piece of equipment with funds donated to Arboretum Associates. It is a floating pump that sucks water from the surface of the pond, pumps it up to a screen on shore that screens out the floating plants, then the water flows back into the pond. It works fairly well, but requires more attention than I had hoped. When we started it in late July, the resident Canada Geese were molting, so there were lots of feathers floating on the pond. For some reason, the pump copes easily with the plants, but the feathers just wound around the impeller and clogged up the works. The pump also does not function well with the large snail shells that we also have in abundance, and we have pulled hundreds of fifty cent piece sized shells out of the pump. On a good day, the skimmer would pull 4 or 5 wheelbarrow loads of aquatic plants out of the pond, but in the heat of the summer I think they were likely growing and multiplying nearly that fast, so it wasn't until the weather cooled off that we finally consistently had open water to show for our efforts. The skimmer does not work well (at all...) on the filamentous algae which for some reason is much worse in the upper pond this year than it has been for the past several years.

We were able to take advantage of more funding from the Arboretum Associates to install another phase of automatic irrigation this summer. I started the project of converting from watering with hoses and sprinklers to automatic underground systems in 2003, and after 12 years I would guess we are somewhere around 80% complete. Even at that, we are still having to run between 12 and 15 hoses every day during the heat of the summer, but that is a significant improvement over the 45 – 50 that we were running at one time. The somewhat scary news

on the irrigation front is that for the first time ever this summer the University's re-claimed water system ran dry! Somewhat surprisingly, the entire system is actually using less water than it did even five years ago (perhaps partly due to the Arboretum's automatic systems increased efficiency), but the City of Moscow is actually producing significantly less sewage to be treated and re-claimed. This is probably partly due to successful water conservation efforts by the City, but likely also a result of the unusually dry spring and summer. The City's sewer system is somewhat 'porous' and some groundwater infiltrates into the system. Since we were so dry this spring there was probably less of that seepage into the system, resulting in less water to re-claim. Fortunately, with some timing adjustments, working with the golf course and the campus grounds crew we were able to stretch the available water without having to completely shut anything down.

An activity that never seems to get the time and attention that it deserves is labeling. I do strongly believe that labeling is one of the biggest things that differentiates an Arboretum from just a park. But, it is pretty easy to find things that seem more important at the time. Kari Clausen was able to work with Bill Bowler to devote enough time to go through the *Hosta* collection and inventory and label everything. One of the challenges of labels is that no matter what we do, labels walk away, or get switched, or get broken, or...

All of these things, new plants, irrigation parts, and labels are only possible because of donations from individuals to the Arboretum Associates. The entire collection has been acquired as a gift to the University, almost exclusively from individual donors. I am grateful for that support and the encouragement I get from visitors every day.



Native Roots plantings 7-18015

Paul Warnick photo



Pond skimmer in action 7-29-15

Paul Warnick photo

15th 'Summer Breezes and Sweet Sounds' Concert in the Arboretum

July 13th marked the 15th year of the Summer Breezes and Sweet Sounds free concert held in the Arboretum. This annual event is co-sponsored by the UI Lionel Hampton School of Music and the Arboretum Associates. Approximately 300 people attended and enjoyed an evening of varied music from Celtic folk tunes to Bach to Bluegrass to an Edgar Allan Poe reading.

This year's concert once again featured faculty members from the University of Idaho and Washington State University, emeriti faculty from both schools, students, and community members. All the musicians and dancers volunteered their time and talent. This event was organized and coordinated by Dan Bukvich, long-time UI professor at the Lionel Hampton School of Music, as well as Director of the Jazz Choir, and a talented composer and conductor. The sounds throughout the evening were indeed sweet as demonstrated so beautifully by flute duos, a cello solo, chamber music, folk music, and rock tunes. As it grew dark and the wind whipped up, it set the scene for the dramatic Edgar Allan Poe reading of *Seven Tall Candles* from *The Pit and the Pendulum*. Then the entire cast performed a grand finale that left the audience exhilarated and showing their appreciation with rousing applause.



Concert goers enjoy the music.

Whitney Schroeder photo

A special thanks goes out to Paul Warnick and his crew for the beautiful venue and for providing golf cart transportation to those who needed assistance getting back and forth to the concert site. Thanks also to various members of the Arboretum Associates Advisory Board for handing out programs to the concert-goers. Next summer's concert date will be July 11, 2016.

— Maureen Taylor Regan

2015 Arboretum Associates Plant Sale

The 2015 Arboretum Associates Plant Sale was held Saturday, May 30, at the ice skating facility located at the Latah County Fairgrounds. The doors opened promptly at 9:00 AM and busy shoppers streamed in until the doors closed at 12:00 noon, resulting in a very successful event. The net proceeds from this year's sale of \$11,178 exceeded those from last year by about \$1,500. Eager gardeners from as far away as Spokane and the Lewiston – Clarkston valley travel to the sale annually stating that, "It is one of the best in the region".

Preparations begin in the fall as Paul Warnick, Arboretum Horticulturist, propagates many plants from the arboretum for the sale and perennials and annual plant plugs are

ordered from a wholesaler. As the spring months draw near, a group of volunteers, mostly Arboretum Associates board members, gather in the facilities greenhouse to transplant the plugs and make an array of hanging baskets. Bill Bowler provides a wide array of *hosta* and other shade plants for the event, much to the delights of numerous "hosta nuts" who look forward to the sale all year.

The continued success of the sale provides much needed funding for arboretum projects and the Arboretum Associates wish to thank all of the volunteers who make it possible. We also wish to thank the wonderful customers who support the sale every year. Mark your calendars for next year's event which will be held Saturday, June 4th, 2016, 9:00 to Noon.

— Jan Leander

Science Saturdays in the Arboretum

In 2015 the Arboretum Associates sponsored another popular season of Science Saturdays in the Arboretum. The series is designed to encourage school-age children to discover and explore the UI Arboretum and Botanical Garden through nature-based programs planned and delivered by local scientists, educators, and other natural resource professionals. This season focused on a theme of pollination, the transfer of pollen from the anther of a flower to the stigma. Whether a passive process, as in the case of our wind-pollinated grasses and trees, or an active process in that insects or birds physically transport the grains of pollen, pollination is crucial for reproduction of many plants.

The first Science Saturdays in the Arboretum session was held in June in The John and Winifred Dixon Butterfly Garden and featured Heather Huston, Education Manager, and Cait McHugh, Education Coordinator, from the Palouse Clearwater Environmental Institute. Through stories, songs, art, and games, more than two dozen attendees learned about the process of pollination and the diversity of pollinators on the Palouse. Winifred Dixon, the garden's namesake, was also present to share her story of how the Butterfly Garden came to be. The July session focused on native bees and was led by Danika Hill, a graduate student in the Department of Environmental Science at the University of Idaho. Who knew there were thousands of native bee species? Through discussions, collections, and a game, participants discovered how native bees are adapted to the morphology and phenology of local plants. The final session held in August featured Megan Taylor, a graduate student in the Department of Entomology at Washington State

University, who introduced more than three dozen curious partakers to the importance of honeybees and the function of a colony, using games, an observation hive, and tasty WSU honey.

This second season of the series provided participants with an opportunity to learn from knowledgeable members of our rich community of natural resource professionals. We look forward to hosting a third season of Science Saturdays in the Arboretum in 2016, so if you are looking for a fun activity on a Saturday morning, please join us in the UI Arboretum and Botanical Garden. These FREE programs are as fun and informative for children as they are for adults. For those who may be interested in leading a program, we will put out a call for proposals in the Spring 2016. A \$250 stipend and cost of materials up to \$150 will be awarded to three successful applicants.

— Amy Ross Davis



Looking for pollinators 2nd Science Saturday 7-18-15

Paul Warnick photo



Observation bee hive 8-15-15

Paul Warnick photo



Honey tasting

Paul Warnick photo

Seasonal Scavenger Hunts Coming to the UI Arboretum and Botanical Garden

The Arboretum Associates board is developing a series of “look and listen” scavenger hunts, one for each of the four distinct seasons we enjoy here on the Palouse. All will feature three focal areas, drawing the user’s attention

to the many changes that occur from one season to the next within the stunning 63-acre landscape. These educational tools are intended to appeal to all ages, cultivating an appreciation for the natural history of the arboretum. On your next visit, please check the Leonard Halland kiosk at the north end of the arboretum for the winter edition of the Look and Listen Scavenger Hunt and attune your eyes and ears to the wondrous changes that our local flora and fauna undergo in preparation for winter.

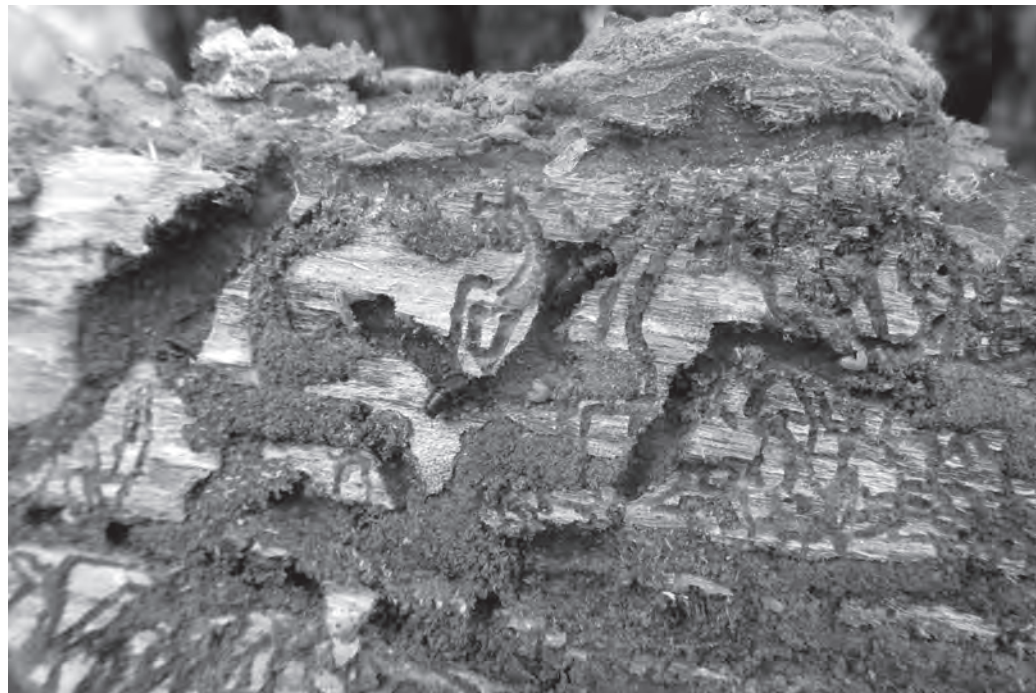
— Amy Ross-Davis

Mountain Pine Beetle (MPB) in the Shattuck Arboretum

In 1969, two forest entomologists in Moscow Idaho (Mal Furniss, USDA-Forest Service, and Jack Schenk, UI) published an article in the *Journal of Economic Entomology* titled “Sustained Natural Infestation by the Mountain Pine Beetle in Seven New *Pinus* and *Picea* Hosts.” In the article, they described the infestation of tree species that do not naturally co-occur with the mountain pine beetle, *Dendroctonus ponderosae* (MPB), while noting that known hosts that were growing nearby were not attacked. They also noted that there were very few of the insects that typically prey upon MPB present in the infested trees although this may have been because of the relative isolation of the

arboretum from surrounding forests. In an eerily predictive statement, Furniss and Schenk said the data “may prove useful in judging the danger of infestations...” in other regions and raised the question of why MPB had not moved further eastward given its ability to successfully infest jack pine (*Pinus banksiana*), a common component of the boreal forests in northern Canada. The answer to their question may have been that the climate associated with boreal forests was not suitable for the beetle in the 1960’s.

If we fast forward to the 1990’s, climate change is part of the explanation of why MPB infestations were on the rise in British Columbia. By the mid-2000’s, the beetle had extended its range into the boreal forests of central Alberta – and jack pine, described as a host of this insect only once before – here at the Shattuck Arboretum, was one of the hosts commonly being utilized. Now that MPB has made the jump into the boreal forest, time will tell how far east it will go.



Adult Mountain Pine Beetle under bark.
Stehen Cook photo

Unfortunately, the Shattuck Arboretum may once again be of use in producing data to answer questions about how MPB will do in pine species not found in western North America. A new infestation of the beetle has been found in the arboretum. It is again colonizing non-native hosts, although this time one native

species, western white pine (*P. monticola*), is being attacked as well. Like in the 1960's, one of these tree species is eastern white pine (*P. strobus*), a common component of forests from the Great Lakes region, extending eastward to the Atlantic coast and south into northern Georgia.

In a nice piece of coincidental timing, entomologists at the University of Minnesota (Dr. Brian Aukema and his graduate student, Derek Rosenberger) just happen to be examining the use of novel host material by MPB, given the threat to that state and beyond. Derek had been discussing the Shattuck infestations from the 1960s with Mal Furniss, and subsequently contacted the Arboretum's Horticulturist, Paul Warnick. They were surprised to learn that mountain pine beetle was once again in Shattuck, repeating the historic infestation that has served as the basis of most current knowledge about susceptibility of eastern pines to this insect. Derek visited the arboretum in late August to make some initial measurements and observations.

Additional measurements are being taken by the forest entomology group at the University of Idaho (Dr. Stephen Cook and Valmir Rodrigues de Andrade Neto, a Brazilian student who is working in the lab). The data being collected by the UI group will compare some of the within-tree population measurements of the MPB in these different pines. The UI group will also take tree material into the lab this winter where they will examine what (if any) predators and other associated species are co-occurring with the beetle in these novel hosts. One goal of the project is to compare the successful utilization of these novel hosts by the MPB associates to determine if they may also be able to adapt to the novel host material.

The two forest entomology labs are planning to integrate some of the data being collected from the current infestation in the Shattuck Arboretum. While no one wants to see MPB back on the UI campus, at least the data being generated should provide some additional understanding of this pest of western forests, as it continues to expand its range eastward.

Stephen P. Cook
Department of Plant, Soil and Entomological Sciences
University of Idaho
stephenc@uidaho.edu

Derek Rosenberger and Brian Aukema
Department of Entomology
University of Minnesota
rose0675@umn.edu
bhaukema@umn.edu



Calendar of Upcoming Events

APRIL 2016

(specific date/location still TBD)

Arboretum Associates Annual Meeting

Town Hall Meeting format to present and discuss "Arboretum Initiative 2015"

(tentative; more information will be forthcoming)

MAY 18, 2016

Spring UIRA Arboretum Tour

2:00 p.m. at the UI Arboretum and Botanical Gardens

Meet at south end, Red Barn (free, public welcome)

Crabapple trees and lilacs blooming are spectacular!!!

JUNE 4, 2016

Arboretum Associates Annual Plant Sale

9:00 a.m. to 12:00 noon

Palouse Ice Rink, Latah County Fairgrounds

JULY 11, 2016

16th Annual Summer Breezes and Sweet Sounds

Free Concert in the Arboretum

7:00 p.m. Bring your blankets and lawn chairs

University of Idaho

Arboretum Associates
875 Perimeter Drive MS 3147
Moscow, ID 83844-3147



PRESRT STD
U.S. POSTAGE
PAID
UNIVERSITY OF
IDAHO

Renew your annual contribution to the Arboretum Associates for Fiscal Year 2016 and contribute to your favorite project fund. Please help the Arboretum grow by renewing your annual gift for the fiscal year which began July 1, 2015. *ThankYou!*

Name _____

Address _____

City _____ State _____ Zip _____

Fund Contribution

Arboretum Associates \$ _____

Centennial Endowment Fund \$ _____

Other _____ \$ _____

Total Contribution \$ _____

Please charge my _____ MasterCard _____ VISA

Card# _____

Expiration Date _____

Signature _____

0001Z

Membership Categories

Active	\$20 - \$49
Sustaining	\$50 - \$99
Donor	\$100 - \$249
Patron	\$250 - \$499
Sponsor	\$500 - \$999
Life Associate	\$1,000 and above

Contributors receive our periodic ARBORNOTES.
Please mail your tax deductible contributions to: Arboretum Associates, University of Idaho, 875 Perimeter Drive MS 3147, Moscow, ID 83844-3147. Thank you.