

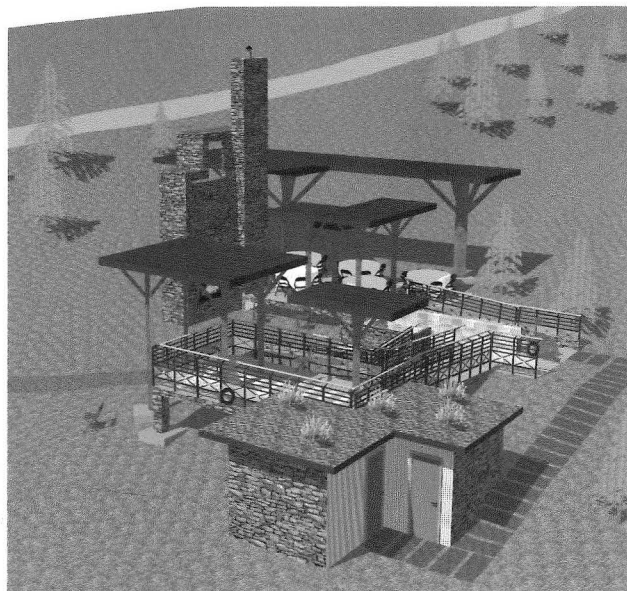
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## Students Find Inspiration for Design in Arboretum

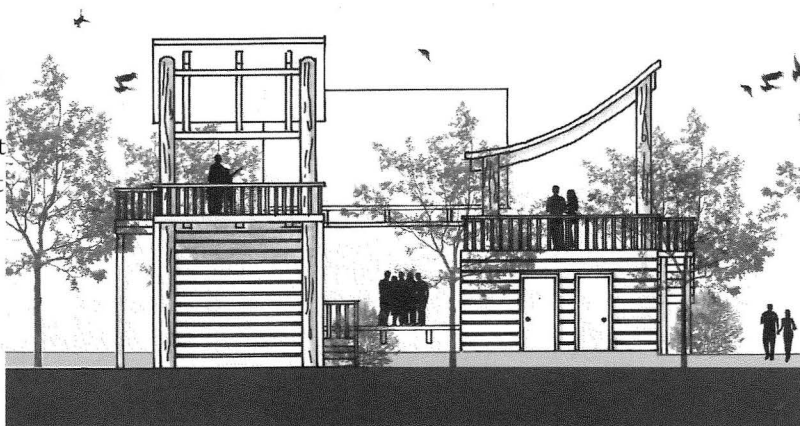
On August 24, Horticulturist, Paul Warnick, met with 50 third year architecture students and three faculty members to introduce us to the Arboretum. We learned about it as a unique geographically based collection of plants from temperate landscapes from around the world, a thriving habitat for songbirds and raptors (and mosquitoes), a quiet place set apart from our busy lives on campus, and a place used and supported by many people in the Moscow-Pullman area and from across the Palouse.



A series of low-lying covered spaces wind down the southwest hillside near Arboretum barn providing accessible spaces for a range of uses. Designed by Ryan Ivie.

The tour was the first step in a six-week project that would engage the students in designing a pavilion for small concerts as well gatherings for events such as weddings or receptions.

This is a project that has been done several times during the past. This year, Diane Arm Priest, Phillip Mead and Matthew Hogan each worked with a group of 16 or 17 students. There were a number of short exercises and critiques during the project and the end result was that each student made a design proposal, including a physical model, for a 1,000 – 1,200 square foot pavilion and



This multi-level structure features wood native to the Northwest, marking the north entry to the arboretum, providing a viewing tower and information kiosk as well as the pavilion. Designed by Diedre Hardy.

*continued*

COME GROW WITH US

# ARBORNOTES

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

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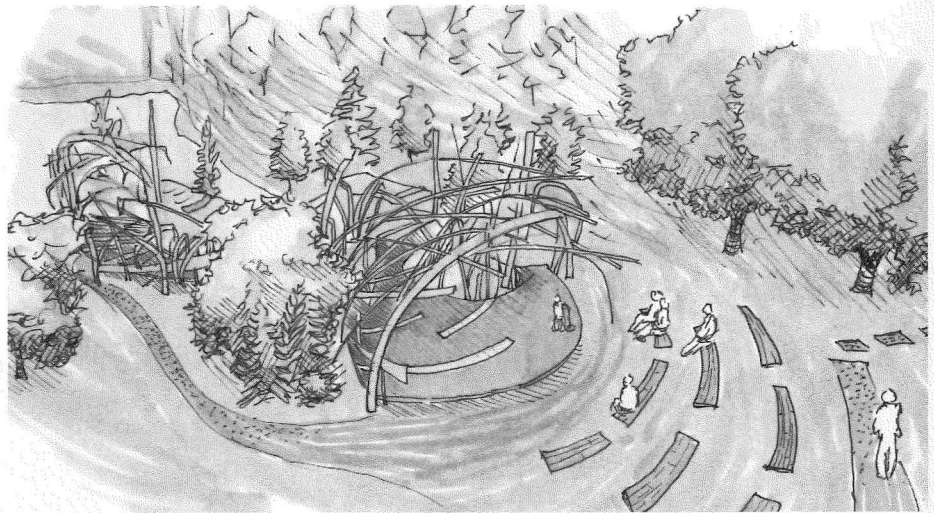
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**DECEMBER 2011**



This lakeside pavilion is one of a series of spaces designed to evoke the natural surroundings while providing a pavilion with hillside amphitheater seating. Designed by Skye Woodhouse.

associated toilet rooms, food-prep, furniture storage and exterior space for a specific site in the arboretum. Students were required to meet the user needs for performances and gathering that included dining, consider location in the arboretum and specific site conditions including slope, vegetation, views and manipulation of daylight. Those who are regular visitors may have seen a student or two measuring, sketching and imagining as many of them were daily visitors.

Two of the main project goals were to make connections to nature and landscape and to learn to manipulate light, so the general design approaches varied by site and demonstrated a number of creative and thoughtfully integrated proposals.



Paul Warnick and students try to find a shady spot on the hottest day of the year.

There were several typical

sites selected by students: the North Entry off Perimeter Drive (envisioned by many as a new, visible entrance to the Arboretum, a "lake" site (nestled at the edge of the lake with stunning views and changing light) and a site in the southwest on the slope to the north of the barn (providing easy access from the parking lot for all who visit the arboretum and providing a southern anchor for the trails).

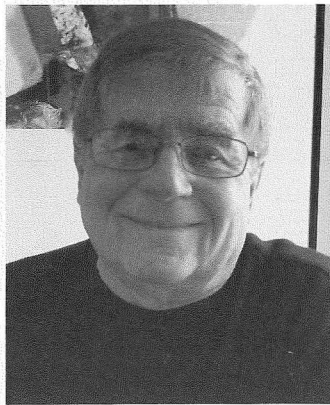
Students were also asked to utilize expressive and effective structural systems and materials. This was another goal that sparked creativity and resulted in a wide variety of evocative structures.

The project focus was to develop strong conceptual solutions, so the projects are not quite ready to move from the drawing boards and computers into the ground, but they provide a wide range of possibilities that the arboretum may wish to consider for the future.

~Diane Armpriest

## For the Love of Hosta's - Beth Bowler Hosta Garden

The cultural critic Lewis Hyde wrote, "A work of art is a gift, not a commodity... a work of art can survive without the market, but where there is no gift there is no art." Bill Bowler lives by this belief.



Bill Bowler

Bill is an Arboretum Associates member-at-large and son to Beth Bowler, for whom the Arboretum's Beth Bowler Hosta Collection is named. The first time I met Bill it was a sunny afternoon in late July. He and I sat on his deck, slightly elevated above the dense carpet of lawn beneath the shade of a sprawling maple, and at the edge of a garden path extending around the garden space. Bill's garden showcases many plants, but it's hard not to notice the prevalence of hostas, an Asian plant species appearing like so many rosetted brushstrokes beneath tree canopy and flowers.

"Were hostas your mother's favorite plant?" I asked him. The Beth Bowler Hosta Collection is one of the arboretum's newer installations, started four years ago. Bill donated the collection in his mother's name, and helped determine the location and initial cultivars, of which there are about two hundred.

"No, my mother was a xeriscape gardener," he told me. His mother lived in Boise, and her garden was on a steep and arid hillside.

Hostas, it turns out, are Bill's favorite. But when I asked him why, he didn't go on to describe the plants' myriad shades of green and gold, or the range of texture and size of the thousands of available cultivars. He didn't

name the delicacy of lavender or white flowers that emerge on scapes and are so nice for cuttings. Instead, he asked me if I'd heard of Lewis Hyde. I had not.

In the 1990's Bill visited Orcus Island, Washington, for a conference. It was there he heard Lewis Hyde give a talk about the commodification of art. As an artist—and University of Idaho architecture professor—Bill was greatly influenced by Hyde. He explained, "To make and collect art, well, any art I wanted to collect I knew I could never afford. But I could afford to buy just about any plant I wanted."

And this is where his hosta garden began.

Hostas are one of the most popular foliage plants in America, but when Bill began collecting, the perennial was not so easy to find. He'd go up to Lamb's Nursery in Spokane, pair up with Stookey's in Moscow to make special orders, or truck over to Seattle or Portland to attend expos (he still does this).

His first plant was Hosta 'Glauca,' a small to medium sized mounding variety with grey-green, heart-shaped leaves. The plant, like most hosta cultivars, is deeply and attractively veined. Bill began with one small bed, planting in an especially shady portion of his yard.

It didn't take long before he was hooked. Bill, who grew up in Idaho, spent every summer at his family cabin north of Sun Valley. Trips to the cabin were an annual ritual, and one to which he had always looked forward. But after transforming the first corner of his yard, he found it almost impossible to tear himself away. He did go to the cabin that first summer, but once there, he couldn't wait to get back to Moscow to tend his garden.



Beth Bowler Hosta Garden photo by Bill Bowler

As Bill's garden took shape bit by bit, he was always a step ahead, envisioning the next expansion, looking out over the still bare areas of his yard and seeing instead the curved beds and striking accent plants we admired on the afternoon of my visit.

Not long after he'd begun his gardening project, he had an

accident in which he shattered his ankle and broke his femur. The six-month recovery was excruciating. In some ways, the garden got him through. He studied the thousands

of different hosta cultivars and continued planning his garden design. In other ways, however, the same thing that was saving him from boredom during recovery also drove him mad. "I could imagine the next garden project, I could see it, but I couldn't do it until I healed. And that was hard." Hostas, he went on, have appeased his desire to collect, but they also lend themselves to what he called a "compulsive behavior."



Hosta's flourish under in the shade of the Beth Bowler Hosta garden photo by Paul Warnick

Compulsive? It's possible, but qualities of determination, confidence, and creativity tend to stand out more. Bill earned a degree in architecture from the University of Idaho in 1966 and has worked in the arts since, basing some of his decisions on what would seem to some a love of art and blind faith. "When I finished," Bill said about graduating from college, "I went to Philadelphia by train. I went with my wife and child. I didn't have a job." It might sound rash, but Philadelphia was home to architecture and urban planning greats Louis Kahn and Edmond Bacon, and that was where he wanted to be.

He had a job almost immediately, and after five years he had millions of dollars of design work to his name. But it was the late sixties, and a volatile time in Philadelphia. So in 1970 his family of three traveled back to Idaho and the Sun Valley area to make a home in Fairfield. They stayed for seven years. His wife at the time was a weaver. Bill took what design work was available and rounded it out with odd jobs. In 1977, he landed back in Moscow and taught at the university's College of Art and Architecture until his retirement in 2010.

Of gardening, Bill says, "It's always an optimistic activity." Sometimes, he says, a planting doesn't do well and he's disappointed, but often his expectations are exceeded. And there is always the possibility of another season.

At times, Bill has had almost a thousand different hosta cultivars in his garden. Minis, some smaller than six-inches high, decorate the edges of the garden path. They are petite, but just as textured as the taller ones. The rounded

and semi-cupped leaves of one of Bill's newer minis, 'Mouse Ears,' looks almost like velvet. Medium sized mounding hostas like 'Guacamole' and 'Last Dance' are grouped together, punctuated by taller clumps of grasses or lilies. Some of the hostas are veined in a crinkly, waffled pattern, while others have almost palmate patterns, giving the broad leaves a look like an Oriental fan, unfurled. Still others

have long and narrow leaves like a broad-bladed grass. Toward the back, five-foot tall hostas catch my eye, and their similarity to banana plants makes it easy to see why for a long time, after their introduction to Europe and North America in the seventeen and eighteen hundreds, hostas were often called "plantain lilies."

They are stunning individually, and appealing in the way of museum pieces behind a red velvet rope: it's hard to resist taking the different leaves between finger and thumb. (Luckily, there's no velvet rope around Bill's garden.) The leaves are cool and waxy smooth to the touch, like a little antidote to summer heat.

Before I left, Bill took me to see the shade-house area along the side of his garage. Hostas, lilies and other plants are arranged according to species and cultivar, with potted plants at varying stages of growth. Most of the plants in the Beth Bowler collection got their start here, and many of the plants Bill showed me will go to the next Arboretum plant sale. Earlier in the afternoon, Bill had asked me if I had hostas in my yard. I had admitted, a little sheepishly given the company, I did not. "Well," he said, sounding a little pleased, "let's get you your first hosta." Then he stooped to pick out one he thought would do well in my garden, gave me some advice about planting locations and wished me luck. It was a lovely gift.

~Jamaica Ritcher

Graduate student in creative writing  
at the University of Idaho.

## Message from the President

On behalf of Arboretum Associates Board of Directors, I would like to take this opportunity to thank all of the many wonderful donors who have made the University of Idaho Arboretum and Botanical Garden the magnificent place it has become.

Many thanks to Paul Warnick, the Arboretum horticulturist, who continues to do an amazing job caring for and guiding the development of the arboretum. In addition to his many responsibilities, Paul posts monthly updates of Arboretum highlights on the Arboretum website. Please take the opportunity to view those as they show the Arboretum at its best and give our out of town visitors a chance to see all the updates virtually.

While funding continues to remain a challenge, the Arboretum Associates take pride in the partnership that has been created with private donors funding all of the planting and improvements in the arboretum and the University providing funding for staffing to insure the arboretum is maintained and remains such an incredible resource.

In this issue of ArborNotes you will see two examples of student projects that have involved the Arboretum. It is truly inspiring to see the results of student projects and listen to them passionately describe their connection to this beautiful and inspiring space.

I wish you a safe winter and an early spring!

~Howard Peavy

## Students Present Entrance Garden Ideas at Annual Meeting

The 34<sup>th</sup> Annual Meeting of Arboretum Associates was held on April 27, 2011 at the University of Idaho College of Law courtroom. Vice President Keith Bromley welcomed members and guests as he called the meeting to order.

Treasurer Joy Fisher distributed a financial report showing net income to the Associates for calendar year 2010 of \$7,002. Joy noted that the 2010 plant sale set a record with gross revenue of \$12,700. The Associates provided \$12,950 towards the completion of the pergola.

The following slate of for Arboretum Associates was elected by unanimous voice vote:

Officers – 2 year term:  
 President Howard Peavy  
 Vice President Keith Bromley  
 Secretary Beverly Rhoades  
 Treasurer Joy Fisher

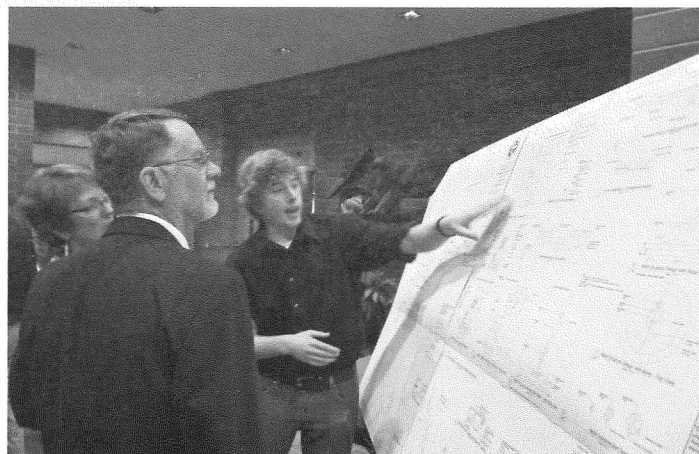
Members at large – 3 year term:

Bill Bowler  
 Harriett Hughes  
 Jennifer O’Laughlin

Arboretum horticulturist Paul Warnick presented an overview of the past years activity in the Arboretum. Paul presented a stunning slide show of scenes from the Arboretum. He reviewed highlights of this past year including the planting of 1,926 new specimens, the trapping of pine beetle by the Maryland Department of Agriculture, receipt of the “Wisescape Award” by the City of Moscow for the Xeriscape garden, and completion of the Asian-style pergola.

The program was a presentation by U of I students titled “Design Development Concepts for the UI Arboretum Entry Garden”. Professor Stephen Drown and Visiting Professor

William MacElroy introduced the student presenters. Their drawings and previews were displayed in the Law School lobby. Students included Matt Ramich, Josh Morse, Kimberly Williams, Cade Sterling, Josh Neill and Kelsey Wakefield. They made brief presentation during the meeting and discussed their drawings and concepts with both before and after the meeting.



Student explains his concept for an entry garden for the Arboretum at the Annual Meeting. photo by Bill Bowler

## *A New Douglas-fir Cultivar Developed in Idaho*

In Western North America, ranging from British Columbia southward to California and Nevada and eastward into the Intermountain areas of Idaho, the Douglas-fir (*Pseudotsuga menziesii*) is a major timber tree which can grow to some 90m high with trunk diameters to four meters. In local vernacular, a Douglas-fir tree is sometimes called “Red Fir.”

After David Douglas, an intrepid Scottish collector-naturalist introduced this Pacific Northwest species into Europe via Scotland circa 1826, many variations and cultivars became widely dispersed in the world’s arboreta and botanical gardens. The cultivar discovered and

propagated by Moscow’s Pat Wells is officially the cultivar Torquis following the patent registration. U.S. Plant Patents, not renewable after they expire, remain in effect for 20 years from the date of the original application. After plant patents expire, the plant can be trademarked through the U.S. Patent and Trademark Office under a different name for renewable increments of 10 year periods. The trademarked name of this Douglas-fir is Emerald Twister™. Pat Wells is a retired, long-time U.S.F.S. researcher-technician who worked with Dr. Jerry Rehfeldt, Research Geneticist at the U.S.F.S. Laboratories on South Main Street in Moscow, ID.

~Richard J. Naskali

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## *A Brief History of Pseudotsuga menziesii ‘Torquis’*

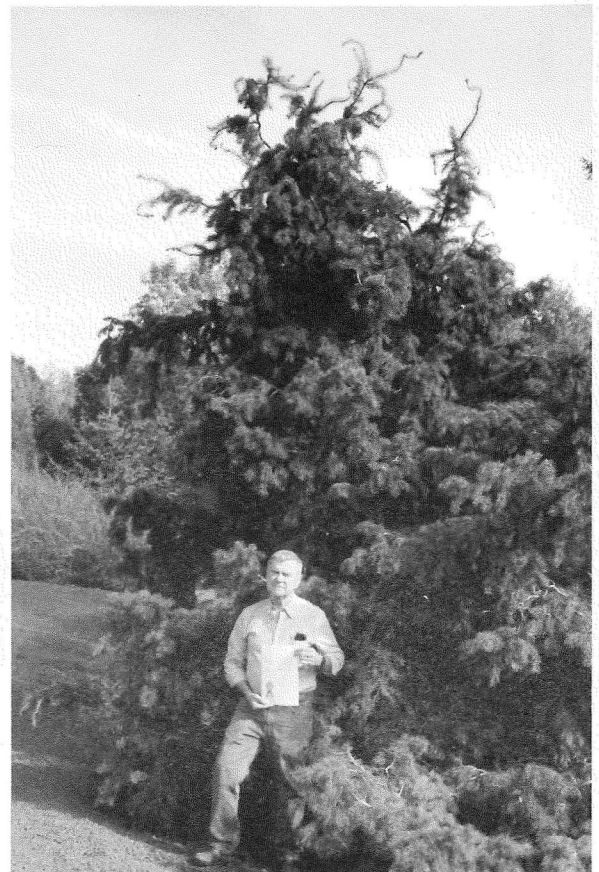
A Forest Genetics Research project of the U. S. Forest Service laboratory in Moscow, ID, established a Douglas-fir hybrid test plot near Grangeville, ID, on the Nez Perce National Forest in 1975 and 1976. In 1984 while we (Wells & Rehfeldt) were checking for survival and growth, we noted that one family of progeny included several trees with a strange growth pattern. The 32 trees from one hybrid cross included eight with the twisting random growth pattern—but only one hybrid tree had the pronounced twisting and retained the green leaf color of a healthy tree. I chose to propagate this tree.

Having a lifelong interest in ornamental plants, I decided to propagate this original tree by rooting cuttings and grafting. After some five years of propagating, on April 24, 1989, I filed for a U.S. Plant Patent through the Forest Service. U.S. Plant Patent number 7,553 was awarded June 11, 1991 for DOUGLAS-FIR TREE “TORQUIS” VARIETY. Because this was the first plant patent the U. S. Forest Service had ever been granted, no one was familiar with what to do with it.

I continued propagating the plants and envisioned a new ornamental cultivar of Douglas-fir; I requested the rights to the patent from the Forest Service. On July 1, 1996, I was awarded the rights to the patent.

Subsequently I negotiated an agreement with the Iseli Nursery of Boring, Oregon, to culture and sell the plants nationwide, while I retained the right to sell them in the northwest (Idaho, Washington and Oregon). Together we trademarked the plant as Emerald Twister™.

~Stephen “Pat” Wells



Pat Wells with the patented Douglas-fir in the UI Arboretum, October 13 2011. Photo by Richard Naskali.

## A Decade of Summer Breezes and Sweet Sounds

The 10<sup>th</sup> annual Summer Breezes and Sweet Sounds Chamber Music in the Grove concert was held in the University of Idaho Arboretum and Botanical Garden Monday, July 11, 2011. Over 250 music lovers and arboretum enthusiasts attended the annual event sponsored by the Lionel Hampton School of Music and Arboretum Associates. The varied and entertaining program again was arranged by Professor Daniel Bukvich of the Lionel Hampton School of Music, and the musicians were students and faculty from the music school as well as community members.

Sean Butterfield, Peter Lee, Vern Sielert, Nathan Top and Charlotte McKell began the evening with a rousing trumpet piece entitled *Intrada* by Robert Lo Presti. It was followed by the Arboretum Percussion Orchestra's energetic performance of *Eight Primes* by Daniel Bukvich. Arboretum Percussion Orchestra members include Jemima Bauer, Emily Benjamin, Navin Chettri, Jenny DeWitt, Quentin DeWitt, Tyler Dixon, Cecily Gordon, Brendan Gordon, Heather Hagen, Mike Locke, Paul Lynch, Christine Maxwell, Kristen McMullin, Jolene Pflaum, Mat Schaefer, and Joe Steiner.

In a shift from the contemporary, Linda Wharton and William Wharton performed a soothingly melodic cello piece entitled *Gavotte* by Jean-Phillipe Rameau.

Then Ferenc Cseszko performed a beautiful violin solo of *Allemanda* (from Partita No. 2 in D minor) by J.S. Bach. This was followed by a wonderful performance by Susan Hess and Tyler Chen on bassoon of *Canonic Sonata No. 1* by Georg Phillip Telemann.

Quentin DeWitt performed a solo marimba piece, *A Little Prayer* by Evelyn Glennie, followed by the trombone quartet of Paul Lynch, Tyler Dixon, Brendan Burns, and

Jolene Pflaum who performed *Achieved is the Glorious Work* by Haydn. Caitlin Blankenship, accompanied by Dan Bukvich on marimba, performed a soprano solo singing *Two* by Daniel Pitts. Graham Fitkin's *Glass* was performed by Vanessa Sielert on soprano saxophone and percussionists



Professor Dan Bukvich shares his love of music and the arboretum with an appreciative audience. photo by Bill Bowler



A rainbow was the final treat for the audience as the concert concluded. photo by Bill Bowler

Mat Schaefer, Joe Steiner, Jemima Bauer, and Kristin McMullin. Christine Maxwell's dance performance of *Suite Seasons* by Sarah E. Maxwell was accompanied by Heather Hagen on violin and Brendan Gordon on viola. The haunting echoes of Laura Huggard's horn performance of *Fantasy for Horn* by Malcolm Arnold filled the Arboretum with sound as the low rumblings of thunder could be heard in the distance. *A Brief Encounter for Trumpet and Timpani* (1963) was performed by Vern Sielert on trumpet and Dan Bukvich on timpani. A Navin Chettri up tempo composition entitled *Nataraj* (*Shiva's Dance*) was performed by Chettri on tabla and voice, Heather Hagen and Emily Benjamin on violin, Brendan Gordon on viola, Tyler Chen on bassoon, Mat Schaefer on vibraphone, and Joe Steiner on marimba.

In an exciting and creative piece composed by Dan Bukvich, entitled *Rockin the Arboretum X*, the Arboretum Percussion Orchestra (and friends) concluded the program. Throughout the evening the musicians were not deterred by a few drops of rain or even the surprise of sprinklers coming on during the final piece. The creative use of a music stand to deflect the sprinkler's flow allowed the musicians to complete the performance much to the delight of the audience and was a wonderful way to end a fantastic evening of entertainment in, what Dan Bukvich called, "an absolutely awesome spot", the UI Arboretum and Botanical Garden.

## Arboretum Associates Donor Roll

Thank you to the many generous donors who supported the University of Idaho Arboretum and Botanical Garden from July 1, 2010 to June 30, 2011. A total of \$93,643 was received from membership gifts, gifts for Arboretum endowments, and gifts to support specific Arboretum projects. Your support makes a difference.

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## By the Numbers: How Many Flowers in One Inflorescence?

In many garden and wild flowers (e.g., *Trillium*, Tulips, Daffodils) a single terminal flower constitutes the inflorescence. In several species and cultivars of Tulips (e.g., *Tulipa praestans* 'Fusilier,' *T. turkestanica*, *T. biflora*) there is more than one flower per stem. The 'King Alfred' and 'Mount Hood' Daffodils have but one flower per stem, whereas stems of the 'Cheerfulness' double *Narcissus* have several flowers per stem.

Perhaps the world's largest known inflorescence is that of the tropical Talipot Palm (*Corypha umbraculifera*, Arecaceae), native in Sri Lanka and Southern India but now cultivated in many tropical botanical gardens and arboreta. It is a very large palm with trunks to 60+ feet tall, fan-shaped leaves to 15+ feet wide and with up to 100+ leaflets per leaf. After growing vegetative for some 30 to 80 years, these palms can become reproductive with one massive terminal inflorescence having one million to a few million flowers constituting one huge inflorescence reaching many meters high and wide. After the one flowering and fruiting event, Talipot Palms die, making these palms "monocarpic."

Back home in Idaho, there are some spectacular introduced flowering perennials, which can be stunning specimens in your garden—given the proper growing conditions. Two introduced members originally classified in the Lily Family (Liliaceae) are notable: The Foxtail Lily (*Eremurus robustus*) and the Giant Allium (*Allium giganteum*) are both portrayed here from



*Eremurus robustus*, one inflorescence, June 21, 2011.  
Photo by Richard Naskali.



A field of hundreds of naturalized Foxtail Lilies in peak flower; Latah County, Idaho, June 21, 2011. Photo by Richard Naskali.

Moscow, Idaho.

Recent botanical reclassifications now place *Eremurus* in the Asphodelaceae and place *Allium* in the Alliaceae.

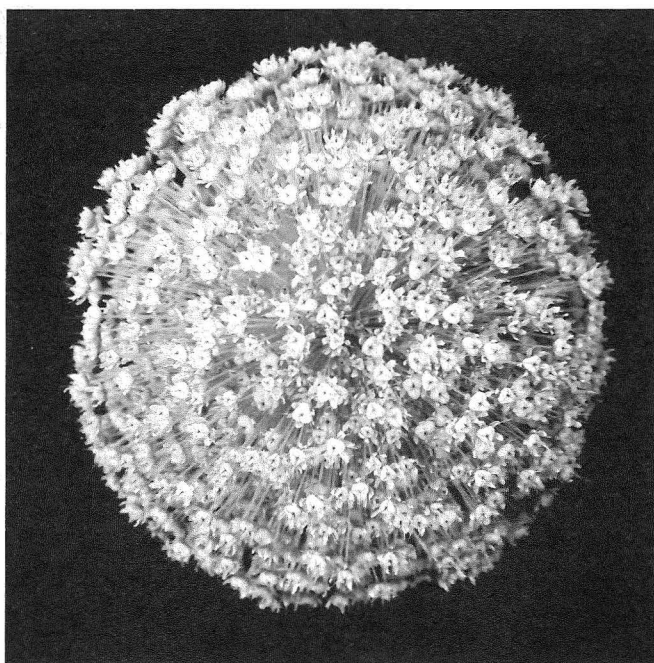
*Eremurus robustus* is native to the Steppe grasslands of Tajikistan and the Pamir Valley area between Pakistan and Afghanistan where summers are hot and dry, winters are cold, and soils are well drained. In the local Palouse where the local environment is analogous to native conditions of western Asia, this Foxtail Lily (sometimes called Desert Candle) has naturalized into colonies of hundreds to thousands of plants over the last century. Special garden highlights can be achieved with a single or very few plants.

Inflorescences of *Eremurus robustus* are racemes—unbranched stems along which are pedicelled individual flowers. Between late March and about July 10, the flowering stems rapidly grow many feet long. The attractive one – inch-wide pink flowers open in a progression over some six weeks, usually peaking in mid June. In 2011, I observed and measured inflorescences and counted flowers and numbers of developing fruits. Six mature inflorescences ranged in final height from 75" to 98"; those six stems bore between 440 and 671 flowers. Perhaps, because of rains, cold weather, lack of pollinators, or other factors, those six stems only yielded a range of 33 to 119 mature fruits; those six stems averaged only 71 mature fruits per flowering stem. Each of those mature fruits had a potential

of 13 to 18 seeds but typically only nine to 13 (average = 12) developed into mature seeds. Nevertheless, imagine the potential plant increase in a proper environment if some 500 flowers on one stem yielded 12 seeds each!

*Allium* is a huge and complex genus of some 700+ species ranging over much of the Northern Hemisphere—primarily in Asia. There are a number of species native in Palouse Country. A few species are native in Africa and Central and South America. The genus *Allium* includes onions, chives, garlic, shallots.

*Allium giganteum* (Giant Onion), native in the Steppe grasslands of Central Asia, is another spectacular garden introduction for Palouse gardens with the Palouse Prairie growing conditions that fit for *Eremurus*.



One umbel of *Allium giganteum* shortly after peak flowering; note the developing fruits (capsules), August 3, 2011. Photo by Richard Naskali.

Each Giant Onion bulb (about the size of a small orange) can produce a series of long, strap-shaped basal leaves, and a three-to-four-foot tall naked stem (a scape, a single internode), topped by one showy terminal umbel of purple flowers by mid-June in Moscow.

The terminal umbel, averaging five to six inches in diameter, typically bears hundreds of flowers. On August 3, 2011, I dissected one maturing umbel, counted the flowers, and found that it had had 1,865 flowers! In that one umbel, 417 of the earliest opened flowers already had dehiscing fruits each releasing five or six by August

3, 2011. Imagine the propagating potential from just one bulb of *Allium giganteum*!

~Richard J. Naskali

## Report from the Horticulturist

The biggest news from the past winter and early spring would be the amount of wind damage in both the Shattuck Arboretum and the 'New' Arboretum.

The damage started with a storm in late November, which did significant damage on campus. It knocked over one hybrid Elm in the 'New' Arboretum, but the real losses were over in the Shattuck Arboretum where many trees were either broken off or uprooted. As often happens there, the damage looks completely random with no pattern in either the types of trees or the directions they fall.

Another storm around New Year's knocked over a series of Russian Olives in the 'New' Arboretum. All six trees were uprooted and fell over. The largest stump is over two feet in diameter. Some local wood turners were able to salvage the larger pieces of Russian Olive. The biggest stump will



Fallen Russian Olive, 'new' Arboretum January 19, 2011 Paul Warnick photo

continued

probably have to stay in place—it would be very difficult to get to it with equipment big enough to move the stump.

Yet another storm in early March took out a few more trees in the Shattuck Arboretum. I stopped counting when the number got over thirty after the January storm, and there were at least five more down after the March winds.

The larger pieces have been sold for firewood, and the brush has been chipped up, with the chips used on site to cover the trails. A group of over 200 state 4-H members volunteered in June to drag the brush down to where it could be accessed by the chipper. Without their energetic assistance, we would never have been able to get nearly as much cleaned up.

Two years ago we started the process of grafting the Giant Sequoia in the Shattuck Arboretum. Ken Dola, the campus arborist, climbed the tree and cut scion wood that was sent to a nursery in Oregon for grafting. The grafts were successful, and they did well enough that they were moved up to one gallon pots and moved outside for their first winter. Unfortunately, that fall we had a severe cold snap in early October. It was cold enough in Oregon that it killed all the nurseries newly grafted Giant Sequoias, along with lots of other species of conifer grafts. The damage wasn't discovered until too late in the spring of 2010 to try grafting them again. So, this January, Ken climbed the tree again and got another batch of scion wood. This year we also sent along wood from an Engelmann Spruce from a group in the 'New' Arboretum



200+ 4-H Volunteers getting ready to go to work 6-16-11

that exhibits amazingly dense, uniform growth and a dwarf Scots Pine that turns a striking bright yellow in cold temperatures. The Scots Pine is a seedling from seed collected from the far north of Russia, along their border with Finland at 61.5 degrees North Latitude (slightly further north than Anchorage, Alaska).

This spring was mostly notable for never

arriving. Most of the spring flowering shrubs and trees were up to a month later than usual, and several things were even slower than that. Even reliably cold hardy things like some crabapples, some quaking aspen, nearly all the honeylocusts and ashes were extremely late to leaf out. Nearly all the trees eventually did sprout leaves, and by the end of summer, they seemed to be back to normal.

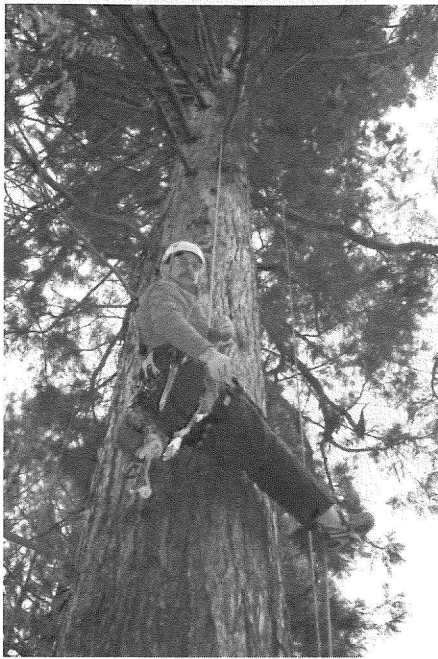
We did not start any major new planting projects this year, but we did plant many new and replacement plants. Every year I try to plant a few things considered marginal for hardiness in our area. I think the two most interesting experiments this year are Japanese Umbrella Pine (*Sciadopitys verticillata*) and Black Mondo Grass (*Ophiopogon*

*Planiscapus* 'Nigrescens').

The Umbrella Pine is an unusual conifer with very distinctive foliage. The needles are very fleshy (almost succulent) and they grow in flattened whorls at the ends of the branches, looking very much like the ribs of an umbrella. There are a couple of established plants that I am aware of in protected sites in Moscow, so we are trying one where it is protected by an east facing slope and a big clump of Forsythia. The Mondo



Paul Warnick, cutting up downed spruce tree, Shattuck Arboretum February 3, 2011  
Charles Zillinger photo



Ken Dola, campus arborist climbing the Giant Sequoia in the Shattuck Arboretum, January 28, 2011  
Mark Cole photo

grass is not a true grass, but actually a lily (*Liliaceae*). It has broad bladed foliage as close to black as any naturally occurring plant I have seen. We planted the Mondo grass in a new combination bed in the Hosta Walk. At the back of the bed is a strip of a new Hosta, 'Empress Wu', which is reportedly the largest growing Hosta presently available, growing up to four feet tall

with leaves up to two inches across in clumps up to eight feet wide! For contrast, in front of the 'Empress Wu' we planted a strip of 'Patriot' Hosta, a variegated cultivar with distinctive bright white, variegated leaves, and then the Black Mondo grass in front of the white variegated Hosta. The 'Empress Wu' were planted out as small 'liner' plugs, so



Ornamental Grasses on the pergola slope 10-13-11

it will be a couple of years before they really show their size. They should make quite a show when they reach full size.

Another project was finishing the plantings on the slope above the new Asian pergola. We planted large swaths of two different cultivars of *Miscanthus*, a genus of Asian ornamental grasses. 'Little Kitten' is one of the most compact selections available, growing only two feet tall or less, which will contrast nicely with the Giant Fountain grass, another *Miscanthus*, which can reach over 12 feet each year! The other new grass *Miscanthus oligostachys* 'Purpurescens' will have purple foliage and seed heads in the fall, blending with the red foliage of the Japanese Blood Grass planted at the bottom of the slope.

The growing season has closed with an unusually long, mild fall. The tender annual flowers in the bed by the barn did not freeze until October 16 this year, by far the latest date in the eleven years I have been here. The mild weather gave us a long color season. 'October Glory' Red Maple, which usually lives up to its name still had leaves and color on November 15 this year.

The brilliant fall color in the Arboretum is possible only because of private donations. All of the plants in the Arboretum are either donated directly or purchased with donated funds. All of the private support is greatly appreciated as it continues to develop the collections.

~Paul Warnick



Planting ornamental grasses on the pergola slope 6-15-11

## Plant Sale 2011

The Arboretum Associates annual plant sale took place Saturday June 4, 2011, in the Palouse Ice Rink located in the Rotary Veterans Memorial Pavilion at the Latah County Fairgrounds. Eager shoppers lined up outside prior to the 9:00 a.m. opening time, eager to be the first to get a look at all the plants that were available. When the doors opened it was clear that shoppers would not be disappointed as the holding tables quickly filled with plant treasures—making this sale another outstanding success.

This year's sale had the usual large assortment of trees and shrubs and various other specimens from the Arboretum, as well as several tables of plants suited to xeriscape gardening. Perennials and annuals were available for both sunny and shady gardens as well as a large assortment of hosta nurtured throughout the year in preparation for the sale by Bill Bowler.

The continued success of the sale is the result of the hard work of many people. Arboretum horticulturist Paul Warnick and his staff work throughout the year collecting and potting specimens that need to be divided in the arboretum. Paul also spends countless hours taking

cuttings, potting up plants, and nurturing them in the greenhouse through the winter so they will be ready for the sale in the spring. Members of the Associates Board along with volunteers meet several times in the early spring at

the greenhouse to transplant plants that have been purchased from catalog vendors as well as to put together the popular hanging baskets that have become a hallmark of the sale. Finally, it takes a huge number of volunteers as sale day approaches to set up tables, haul plants to the ice rink, and organize and tidy up the plants once they have been delivered. On sale day volunteers arrive well before the opening to get their floor assignments for the day and tend to last minute details. Once the doors open at the workers barely have a chance to catch their breath until well into the morning when the first press has passed.

Arboretum Associates wish to thank all who volunteer and

help with sale and, most importantly, want to thank the many loyal customers who return year after year to enjoy the festive atmosphere and purchase wonderful plants in support of the UI Arboretum and Botanical Garden.

~Jan Leander



Sharyl Kammerzell was the lucky winner of the planter at the annual plant sale. photo by Joy Fisher



Shoppers choose among the wide variety of plants. photo by Bill Bowler

## Beneficial Pine Beetle Research in the Arboretum

When most people hear the words Pine Beetle, they envision the boring beetles that are devastating pine forests all over the west. However, not all Pine Beetles are bad; in fact, there is one species found on the Western White Pine in the Arboretum that may help save forests of Canadian Hemlock in the Eastern United States.

The Hemlocks in the East are being attacked by an adelgid (aphid-like insects that only feed on conifers) that has been found to have originated in Japan. The same species of adelgid is also native on Western Hemlocks—both Mountain Hemlock (*Tsuga mertensiana*) and Western Hemlock (*Tsuga heterophylla*). Research showed that a species of beetle native in both Japan and the West Coast feeds on the adelgid, helping to keep the populations of adelgid low enough to allow the hemlocks to survive the infestation. Further research found that the beetles could be captured from Hemlocks on the West Coast, raised in captivity to increase their numbers, and then released as bio-control agents. Researchers have been collecting beetles from the Seattle and Vancouver, B.C. areas since 1998. They were carefully studied to insure they were not carrying other pathogens and that they would not damage other plants before they were released. This program has proven to be successful, but it has been difficult to collect enough beetles, and the West Coast beetles have not survived well in the northern parts of the Canadian Hemlock range.

A partial solution to that problem has been discovered by Dr. Stephen Cook from the University of Idaho. He found the same species of beetle that feeds on the Hemlock adelgid is also present and feeding on



Biff Johnson, Maryland Department of Agriculture shaking the branches of Western White Pine to collect predatory beetles. 4-13-11



Biff Johnson, Maryland Department of Agriculture, collecting beetles into glass vial for shipping. 4-13-11



Glass vial containing predatory beetles (small black spots on the raffia) 4-13-11

another species of adelgid on Western White Pine in Northern Idaho. Some of those beetles were collected and tested. It turned out that they actually preferred to feed on the hemlock adelgid, and they proved to be better able to survive the colder climates of the northern range of the hemlock.

Another challenge with the program is finding trees that are accessible when the insects are active. Both the adelgids and the predatory beetles are unusual in that they are active in cool temperatures. The beetle has been found to be most active when temperatures are a little above freezing and winds are calm. The beetles are found in the foliage of the conifers, so capturing them is only possible on trees with foliage close enough to the ground to be accessible. Researchers have found the right combination of those factors on the Western White Pine in the Arboretum. A team of two to three people has been coming out to the Arboretum twice a year since 2007 to capture the beetles. They watch the Moscow weather on the internet and try to pick a time when the weather conditions will be right for insect activity. The researchers tap the branches of the pines with a pole, while holding a white cloth collecting sheet under the branches. The beetles are very small, but

visible to the naked eye with a little practice. The researcher then uses an aspirator to suck the beetles into a glass vial. Each day, the collected beetles are sent by over-night shipping to the New Jersey Department of Agriculture Beneficial Insect Rearing Laboratory where they are raised and multiplied. I am guessing that the beetles that manage to get caught probably leave the Arboretum feeling like they have won the lottery.

~Paul Warnick

# University of Idaho

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