Renew your annual contribution to the Arboretum Associates for Fiscal Year 2013 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, 2012. Thank You!

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, P.O. Box 443147, Moscow, ID 83844-3147. Thank you.

John and Winifred Dixon Butterfly Garden

John and Winifred Dixon have been long time Arboretum supporters, with one of the most creative (and time consuming) methods I have ever seen. They collected errant golf balls in the Arboretum, cleaned and sorted them, then sold them at the Moscow Farmer’s Market and donated the proceeds to the Arboretum. In 2009 they mentioned that they thought that a Butterfly Garden would make a nice addition to the Arboretum. I started looking into the idea, but I didn’t make much progress until John died quite suddenly in 2010, and the Butterfly Garden was designated as a memorial.

I started looking at possible sites within the Arboretum. There were a few requirements that dictated where it would be located. The first requirement from my perspective was that it be easily accessible for the public and for maintenance. Since our maintenance activities are based out of the Arboretum barn, it seemed that it should be relatively close to the barn. Since the garden would probably include a range of plants from different parts of the world, by the barn also made sense, since that area is designated for Display Gardens in the Arboretum master plan, rather than restricted to plants native to specific geographic areas like the rest of the Arboretum. Another desirable characteristic for a successful Butterfly Garden is accessible water and mud. Both of those could happen by the stream—so the logical spot seemed to be adjacent to the existing Xeriscape Garden.

The John and Winifred Dixon Butterfly Garden is being installed adjacent to the existing Xeriscape Garden.gunn

Come Grow With Us

continued
Garden. As a bonus, the flowering plants in the Xeriscape Garden will add to the available food sources, and the nearby poplars and willows can serve as host plants for some native butterfly gardens.

Butterfly Gardens seem to be divided into two types—those that are designed primarily as a food source for the adult butterflies and those that are designed to provide habitat and food sources for the entire life cycle from caterpillar through chrysalis to the adult butterfly. Given our limited space and resources, it seemed best to primarily focus on adult butterflies. The garden was designed using a fairly limited number of species of perennial flowers, all chosen for their attractiveness to butterflies, primarily high nectar content combined with floral tubes. I did include three different species of milkweed (Asclepias). Their flowers are attractive to many butterflies; the plant is also a host plant for the Monarch Butterfly caterpillar. Monarchs are not common here in Moscow (partly because milkweeds are not common); but maybe the new additions will help. One frequent Arboretum visitor photographed a Monarch in the Butterfly Garden this summer. No doubt that was just a lucky coincidence since the plants in the garden were barely getting established. It was still fun to see the picture. In addition to the perennial beds, I also included one bed of annual flowers that attract butterflies, including cosmos, calendula, verbena, and nicotiana. All of the annuals that were selected seem to be divided into two types—those that are re-seed themselves (often too well!) so the idea is let them re-seed and mix them themselves.

I wanted something besides just the plants to attract human visitors to the site. I remembered from my days in a retail nursery that bridges seem to automatically act as children magnets. We sold small ornamental bridges at the nursery, and we would display them by putting them out in the aisles. Children would run back and forth across the bridges, even though they really didn’t go anywhere. I found a kit for a bridge that would work and recruited Ken White, a contractor friend of the Dixon’s to help with constructing the concrete footings for the bridge. Then my crew and I installed the bridge. It seems to succeed as planned as I often see children on the bridge. The final piece of the puzzle was to identify the site and recognize the donors. I liked the way the engraved basalt rock worked in the Asian Pergola, and we would display it on site. That turned out that the most challenging aspect was engineering the way to strap it so that the University’s big loader could lift it. Surprisingly, it settled down into the hole with the inscription oriented properly and nearly perfectly level.

Now, we will wait for spring and hope that the perennials have all established well enough this year to flower prolifically next year. One source I read said that butterflies are ‘near sighted’ and a big splash of color works best to attract them. I am guessing that the color will also attract more human visitors! As we enjoy this new garden next spring—and for many years in the future—we will continue to thank John and Winfred Dixon for their generosity.

— Paul Warnick

New Pines Inoculated with the Morel Fungus

A new planting of ponderosa pine in the UI Arboretum parallels a research project established in the University of Idaho Experimental Forest (UEF) by PhD student, Mary Ridout. Mary and her mentor, George Newcombe, are experimenting with microbial inoculants that might benefit western conifers. About half of the ponderosa pine seedlings added to the Arboretum this fall were inoculated with a morel fungus. Morels are highly prized, wild edibles in the Pacific Northwest. Not only do morel fungi form gourmet mushrooms in the spring, but they also colonize many plant species. In western conifers morel fungi are typically mycorrhizal with the roots of their hosts. In additional research, Mary and other members of George’s lab have found that morel inoculations can improve growth, seed production, heat tolerance and disease resistance in some plants. No one knows, however, whether inoculation of the new seedlings will lead to morels fruiting in the Arboretum. And if it does, those morels may first appear many years from now.

— George Newcombe and Mary Ridout

Will Boyd constructed Butterfly Garden bridge, 6-26-12 Paul Warnick photo.

Plaingains at University of Idaho Experimental Forest. Mary Ridout 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, 2011 to June 30, 2012. A total of $36,478.90 was received from membership gifts, gifts for Arboretum endowments, and gifts to support specific Arboretum projects. Your support makes a difference.

Sponsor
Julie & David Levine
Judith Marineau
Elinor Michel & Walter Henford
Ellen Therin
Kathryn & James Whistler

Patron
Diane Armbrust
Helen Bohman
Karen & Donald Burnett
Christine & Terry Gray
Cindy Johnson
Rebecca & David Knopp
Ruthie & Duane Nelligan
Jennifer & John O’Laughlin
Pearl Snider

Donor
Anonymous
Marcia Anderson & Douglas Hughes
Cheryl & William Ardrey
Louise & Jasper Avery
Alane & Roger Blanchard
Dorothy Burlin
Jane Button
Susan & James Calvert
Lisa & Duane Charr
Lois Chilton
Jill & Ray Dacey
Sidonia DeWitt
Gail & Terry Eckwright
Robin & Douglas Finch
Joy & Doug Fisher
Lucinda & Jim Fischer
Barbara & John Foltz
Marin Fry
Rhonda & David Gaylord
Mary & Archie George
Camil Glassy
Patricia & Tim Greene
Mary Jo & Joel Hamilton
Ann & Willard Harwood
James Heidelberger
Alice & Tom Hennessey
Sara & John Holup
Joan & Crawford Judge
Joanie & Larry Kirkland
Betty & Walter Kochan
Jean & Roger Koros
Jan & Dick Leander
Carolyn & Thomas Lege
Corinne Lyle
Barbara McKean
Moscow Garden Club
Shirley Newcomb
Malcolm Rentfrew
Beverly Rhoades
Susan Roberts
Lois Samuelson
Martha & Dan Schmidt
Andrea Sharp & Charles Horgan
Elisabeth Shepard
Katherine & David Spencer
Nancy Sprague & William Phillips
Joaanne Sutter
Kathryn Swenson
Mary & Steven Ulrich
Janet Wagner
Barbara & Paul Warnick
James White

Sustaining
Emma & Cen Atchley
Nina Bonacasa-Perez
Warren Bowler
Andrea Chavez
Caroline Christenson
Patty & Gary Crabtree
Constance DeWitt
Kathryn & James Dunn
Joan & John Edwards
Mary Fisher
Martha Ford & Michael Kyte
Sanja & John Goldnict
Janet Grever
Jean Harvey & Earl Drucker
Patricia Heckin
Iris & Ronald Hurlbert
Mary & George Klingler
Kristie McMaster
Nancy & Reid Miller
Beverly & Steven Poole
Jan & David Rank

FY2012 Gifts to Arboretum
Endowments
Marilyn & Chris Brown
Amy Canfield & Joel Mills
Mary Connally
Chris Crain
Gail & Jim Hawkins
Alfred & Bonnie Jansen
Kay & John Marin
Richard Naskali
W. Anthony Park
Ruthanna & G. Vance Rauer
Lois Samman
Robert N. Steele
Karen & Matt Telin
Theodore & Robert Tuttle
Jacqueline & Dennis Wheeler
Susan Zenker
Elisabeth Zimmer

Fiscal Year 2012
Membership Gifts
Life Associate
Elsa & Elbert Barton
Judi Beck & Tom Alberg
Bert Bowler
Ben Bowler
Wilma & Ed Bowler
John Burlin
Sharon Christoph & Christopher Davidson
Robert & Charles Graham
Alma & David Hanson
Patricia Jordan
Jan & Dick Leander
Norma Lewis
Louise Luke
Makita & Chris Lucier
Judith Marinear
Moscow Rotary Club
Richard Naskali
Malcolm Rentfrew
Melissa Rockwood
Norma Slate
Marguerite Smiley
Ruth & Myrl Stein
Robert N. Steele
Jeanne & Ray Stein
William Stellmon
Gene Thompson
James White
Doris Williams
Jaki Wright & Bill Bowler

2012 Plant Sale a Success
The Arboretum Associates annual plant sale was held on June 2, 2012. This is the major funding raising project of the associates and this year we had our second highest total sales of $13,068.50. The plant sale is an amazing community event that happens because of the work of very dedicated volunteers as well as Arboretum Horticulturist Paul Warrick and his staff. It takes countless hours to collect, propagate, transplant, and nurture all the plants for the sale. We are grateful for the many volunteers who make this event possible but also for the hundreds of loyal customers who look forward to the first Saturday in June with anticipation. We hope you will join us on June 1, 2013!

— Joy Fisher
Crocus Versus Colchicum: Two Frequently Misidentified Plant Genera in Two Different Plant Families

Crocus is a very common corm-forming garden perennial with scores of species and cultivars of spring and autumn flowering plants in the Iris Family (Iridaceae) which also includes Gladiolus and Crocosmia, etc. Crocus plants have grass-like leaves and flowers in shades of blue, white, yellow, rose, and intermediate shades. Crocus sativus, the famous saffron of cookery and coloring of many monks' gowns, is the costly grocery 'spice' which rivals the cost of gold on a weight basis. Saffron is a sterile plant, vegetatively propagated in Spain, India, and other Middle Eastern and Asian sites where low wages can permit its production, harvesting, and packaging.

Crocus plants, like gladiolus, annually form new corms from terminal buds atop a diminishing-withering corm. As a flowering corm withers and new corms form, contractile roots from the new corm(s) slowly pull new corms down in the soil; the depth of corms remains constant in soils even in neglected gardens.

Crocus flowers, in non-double forms, each have three sepals, three petals, three stamens, and a pistil (gynoecium) of three united carpels with three stigma branched atop. Fertile fruits can bear many seeds. Just as in the case with Iris, Gladiolus, Crocosmia, and other members of the Iridaceae, the flower parts are all attached/developed on the top side of the pistil/seed capsule (epigynous floral insertion). In sexually fertile crocus, fertilization occurs underground after pollination occurs well above ground by action of various pollinators. If pollination and fertilization occur the base of a maturing capsule elongates and typically raises the seed pods above ground by midsummer; where ants and other agents disseminate the seeds.

In the case of Colchicum, floral anatomy and development vary greatly and significantly from the patterns typical of Crocus. Colchicum is a member of the Lily Family (Liliaceae)—which is recently raised by some taxonomists to the Colchicaceae. Single flowers of Colchicum each have three sepals, three petals, six stamens, and a pistil (gynoecium) of three united carpels topped by a three-lobed or branched stigma. In contrast to Crocus, the sepals, petals, and stamens of Colchicum are all attached below the pistil (hypogynous floral insertion)—as you regularly can observe in lily, tulip, and onion flowers! Colchicums in most gardens flower in late summer to mid-autumn after the coarse, spring-emerging foliage has died down; flowers emerge without any leaves—thus resulting in the names: 'Naked Ladies,' 'Magic Lilies,' etc.

Our most common Colchicum autumnale should be called 'Colchicum' or 'Meadow Saffron' and should not be called 'Fall Crocus.' For the sexually fertile species and cultivars of Colchicum, pollination occurs above ground; and the pollen tubes grow down through the stigmas and styles and sexual fertilization occurs well underground near the larger dense corms. In the following spring, large, oval shaped coarse leaves emerge and developing Colchicum fruits (capsules) develop, mature, and open well above ground; seeds emerge about mid-summer.

Report from the Horticulturist

It has been a relatively calm year in the Arboretum this year with fewer dramatic weather events than usual, stable budgets, and adequate staffing. I am grateful to have had, once again, a motivated, hard working crew of seasonal workers. All of that has allowed us to continue to improve the maintenance of the site, while at the same time adding new things to both the Shattuck Arboretum and the Arboretum and Botanical Garden.

Most of the plants in the Shattuck Arboretum (Shattuck) were originally planted between 1909 and 1917 under the supervision of Dr. C.H. Shattuck. We have written records and maps of those plantings that were updated in 1934; although no other plantings happened, I have not seen any records of them. This spring a crew of volunteers from the state 4H Convention helped plant 39 new trees and shrubs in the open area west of the amphitheater. The collection includes trees and shrubs native to the west side of the Cascade Mountains. One big leaf maple (Acer macrophyllum) was planted in 1922 in the Shattuck. We added more of those along with vine maple (Acer circinatum) along with some more marginally hardy things like Pacific dogwood (Cornus nuttallii). We also planted some of the same species in the "new" Arboretum to see if the site makes any difference in their survivability. All of these plants were provided by a donation in memory of Jerrod R. Rockwood by his daughters Melissa Rockwood and Betsy Rockwood Snyder.

The state 4H conference also donated funds for a third new bench in the Shattuck. It is located west of the amphitheater with a great view over the amphitheater to the Administration Building. A crew of nearly 100 teenagers volunteered a morning of their conference to work in the Shattuck. Besides the Rockwood collection of plants, the volunteers also planted five new giant sequoias around their new bench. Three of the new trees are seedlings from seeds of the giant sequoia that was planted in 1916, and two of them are grafts of the new cultivar "Idaho Endurance," which grew from cuttings from the same tree. In addition to helping plant trees, many of the volunteers did a massive clean up job, hauling brush from multiple downed trees down to where we could access it for chipping; and another group worked on removing English Ivy vines from many trees.

English ivy (Hedera helix) can be a significant problem in forests in milder climates where the vines climb established trees, sometimes girdling or shading out the host tree, and choking out more desirable native understory plants. English Ivy also has a somewhat unique characteristic in that it rarely if ever flowers while growing horizontally, but...
the water. Those nutrients are some of the contributing factors to the excessive algae growth that plagues the pond in warmer weather. We are trying what may prove to be a cheap, easy fix by installing a snow fence all along the east edge of the pond in hopes of catching the leaves before they blow into the pond. I certainly don’t like the aesthetics of the snow fences we install every year, but they do seem to discourage sledgers; and hopefully this new one may help make the pond more attractive during the summer.

All of the funding for new plants and other additions to the Arboretum (including the new automatic irrigation) is provided through donations. Your continued support is always appreciated; it is what allows us to continue to improve the Arboretum.

— Paul Warnick

Naskali’s Garden Nominated for 2012 Moscow Wisescape Award

Dr. Richard Naskali, Emeritus Arboretum Director and Professor, local botanist—This garden has been a work in progress for 30+ years. Dr. Naskali started his Wisescape adventure by eliminating all turf and his lawn mower. He added a variety of perennial and bulb plants that bloom throughout the seasons. Adding mulch decreased weeds. The walkways, guide stones and plant species give a feeling of walking through a poly-ethnic, Japanese style garden. He recommends, “Get a good book with pictures and information about the plants that you are interested in and take a walk through the arboretum to understand what the plants will look like when they are full sized. Follow nature.”

continued...