

Please visit our website at uidaho.edu/arboretum

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UI Arboretum Associates Facebook Page



ArborNotes

A Newsletter of the University of Idaho Arboretum Associates

May 2023

Message from the President

Spring greetings. We are happy to be sending you our second full color issue. We're also sending this spring/summer issue to determine if we want to send two issues a year in the future. Please let us know if this is something you would like.

The UI Arboretum Associates Annual Plant Sale is coming up on May 20th—we hope to see you there. Don't forget you can access a list of the plants that will be available on our website at: <u>uidaho.edu/dfa/facilities/</u> <u>arboretum/about-us/arboretum-associates</u>.

I'm writing this while it is still winter and am looking forward to spring and all the new and blooming plants in the Arboretum. Many of you enjoyed the Arboretum all through the winter and I hope you find spring as glorious as I am looking forward to. I am especially anxious to see how much the new golden chain trees (*Laburnum x watereri*) will grow this year.

As summer approaches we hope you will visit the *UI Shattuck Arboretum* as well. There are now picnic tables available in *Price's Green*. There are also some benches near the Sequoia tree overlooking the lawn in front of the Physical Education Building and in other lovely viewing spots.

Lastly, I want to thank all of you who so generously give to UI Arboretum Associates and other Arboretum designations. We wouldn't exist without your continuing support. It is very appreciated.

> Katherine Clancy, President UI Arboretum Associates Board

Come Grow With Us

Spring in the Arboretum



Paul's Scarlet Hawthorn and Lilacs P. Warnick | 5-21-21



Golden Chain Tree and Lilacs P. Warnick | 5-21-21



Crabapples | P. Warnick | 5-10-19

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

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MAY 2023

Thank You!



for electronically advertising the UI Arboretum Associates 2022 Plant Sale on your sign

Thank You!



for electronically advertising the UI Arboretum Associates 2022 Plant Sale on your sign

ArbNet – An Arboretum Accreditation Program

This article is excepted from the ArbNet website at <u>www.arbnet.org</u>

ArbNet – an Interactive Community of Arboreta – "is an interactive, collaborative, international community of arboreta and tree-focused professionals. ArbNet facilitates the sharing of knowledge, experience, and other resources to help Arboreta meet their institutional goals and works to raise professional standards through the ArbNet Arboretum Accreditation Program."

Arboreta are places where collections of trees, shrubs, and herbaceous plants are cultivated for scientific and educational purposes. And though the definition is brief, it encompasses a wide range of activities that Arboreta embark on to meet their personal mission statements and goals.

Mission statements can have a global view, such as the *Kew Garden's* (<u>https://www.kew.org/kew-gardens</u>) mission "to understand and protect plants and fungi, for the well-being of people and the future of all life on Earth." *The United States National Arboretum's* (<u>https://usna.usda.gov/</u>) mission is more people centric and is dedicated to "enhancing the economic, environmental, and aesthetic value of ornamental and landscape plants through long-term, multi-disciplinary research, conservation of genetic resources, and interpretative gardens and exhibits."

The University of Idaho Arboretum and Botanical Garden has a locally focused mission and "are an outdoor museum maintained for the acquisition and proper curation of a living collection of native and introduced plants hardy in the Inland Pacific Northwest. As a primary reference collection, the arboreta will emphasize plant variation and genetic diversity. The highest priority of the arboreta is to develop, curate, and maintain a diverse collection of cultivars and species of known origin."

ArbNet's *Arboretum Accreditation Program* was developed to establish and share a widely recognized set of industry standards for the purpose of unifying the Arboretum community. No other international program of accreditation existed that was specific to Arboreta.

The ArbNet Arboretum Accreditation Program:

- Recognizes arboreta at various levels of development, capacity, and professionalism.
- Fosters professionalism of arboreta worldwide.
- Enables collaboration in scientific, collections, and conservation activities.
- Advances the planting, study, and conservation of trees.



Any arboretum or public garden with a substantial focus on woody plants may apply. Accreditation is based on self-assessment and documentation of an arboretum's level of achievement of accreditation standards, including planning, governance, number of species, staff or volunteer support, education and public programming, and tree science research and conservation. The entire program is free of charge.

Benefits of accreditation include:

- Be recognized for achievement of specified levels of professional practice.
- Work toward higher levels of professional standards once accredited.
- Identify other organizations at similar or higher levels of accreditation to provide comparative benchmarks and models for further achievement.
- Earn distinction in your community, university, college, or government agency.
- Exert leadership and influence by serving as a model to encourage professional development in other organizations.
- Identify opportunities for collaboration with other arboreta for scientific, collections, or conservation activities.

Arboreta can become accredited by evaluating and submitting documentation on the level of achievement of specified standards. The accreditation process and criteria has Arboreta:

- Evaluate which level suits them.
- Complete an extensive, 14-page application that addresses plant collections policies, educational/public programing, collaborations with other institutions, collections data sharing, tree science, planting, and conservation and plant conservation activities.
- Make sure all labeling requirements are met prior to submitting the application.

The ArbNet staff reviews your application and decides within four weeks. The decision is based on self-assessment and documentation of your arboretum's level of achievement against accreditation standards. ArbNet staff may schedule future site visits. Accreditation is valid for five years with a simple renewal every five years.

The *UI Arboreta and Botanical Garden* is an accredited, Level-III member of ArbNet. Level III Arboreta have "at least 500 species of woody plants, employ a collections curator, have substantial educational programming, collaborate with other arboreta, publicize their collections, and actively participate in tree science and conservation."

Yvonne Barkley, UI Arboretum Associates Member-at-Large UI Arboretum and Botanical Garden

Want More?

Want to know more about the UI Arboretum and Botanical Garden?

Sign up, find, and/or like one or all of the below:

The University of Idaho Arboretum and Botanical Garden website provides in-depth information about the sites. Find it at: www.uidaho.edu/dfa/facilities/ arboretum

The *UI Arboretum Associates* has a Facebook page which has frequent posts about what's happening that day in the Arboretum. Find it by scanning the QR code on the front of this issue of Arbor Notes.

And last, but not least, sign up to have the *UI Arboretum Monthly Update* delivered directly to your mailbox at: <u>pwarnick@uidaho.edu</u>



Crabapples and Hosta | P. Warnick | 5-27-22

May 2023



A geographically-based living museum of documented plants for education, inspiration and beauty.

The Arboretum is open from dawn til dusk with no admission fee.

This 45 acre collection of over 3000 different varieties of plants began in 1982. Most of the site is arranged geographically, with plants arranged into four areas: Asia, Europe, Eastern and Western North America, depending on where the plants originated. The south end of the Arboretum has display gardens, including a xeriscape demonstration garden, butterfly garden, collections of iris, daylilies and heathers, and annual flower displays.

The gravel road makes a 1 1/2 mile loop, there are several secondary, wood chip covered trails leading to some spectacular views.

The grids on the map refer to locations for the plant inventory on the Arboretum website.

To protect the plant materials and wildlife as well as enhance visitor safety and enjoyment, please:

- No pets .
- Do not drink or play in the waste water used in all sprinklers
- Bicycling and jogging on roads and trails only, pedestrians always have priority
- No athletic games, Frisbee, winter sports, swimming or wading
- No camping, hunting or fishing



Calendar of Upcoming Events

MAY 20, 2023 UI Arboretum Associates Annual Plant Sale

It's time to garden. The UI Arboretum Associates Annual Plant sale is in a few short weeks. Mark your calendars and come early – plants go

fast. Cash or checks only please.

Time: 9 am to 12 pm

Location: Park's Activity Recreation Center (home of the New Palouse Ice Rink), 2009 S. Main Str. (former NRS BLDG.), Moscow, ID.

JUNE 3, 2023

Paper Making Class

Learn how to make paper from materials gleaned from the UI Arboretum. Class minimum four, class maximum eight. There is still room in all sessions.

Time: 12:30 to 5:30pm.

Price: \$80; sign up for all three classes for a total cost of \$200.00. A deposit of \$25 will be required and all but \$5 will be refundable if you cancel at least seven days prior to the day of the class. \$5 from your class fee will go to the UI Arboretum. Email **<u>rachael.eastman@</u> <u>gmail.com</u>** to sign up for a class. Additional information about meeting and making locations will be sent to you once you sign up.

JULY 10, 2023

22nd Annual "Summer Breezes and Sweet Sounds" Concert

Bring your blankets and lawn chairs and come and enjoy a special evening in the Arboretum. Time: 7:00 pm Price: Free Location: UI Arboretum and Botanical Garden

JULY 22, 2023

Paper Making Class

Learn how to make paper from materials gleaned from the UI Arboretum.

Time: 10:00 am – 3:00 pm. Bring a sack lunch. Price: \$80; sign up for all three classes for a total cost of \$200.00. A deposit of \$25 will be required and all but \$5 will be refundable if you cancel at least seven days prior to the day of the class. \$5 from your class fee will go to the UI Arboretum. Email <u>rachael.</u> <u>eastman@gmail.com</u> to sign up for a class. Additional information about meeting and making locations will be sent to you once you sign up.

OCTOBER 14, 2023 Paper Making Class

Learn how to make paper from materials gleaned from the UI Arboretum.

Time: 12:30 – 5:30pm.

Price: \$80; sign up for all three classes for a total cost of \$200.00. A deposit of \$25 will be required and all but \$5 will be refundable if you cancel at least seven days prior to the day of the class. \$5 from your class fee will go to the UI Arboretum. Email **rachael. eastman@gmail.com** to sign up for a class. Additional information about meeting and making locations will be sent to you once you sign up.

Then and Now - Leonard Halland Kiosk

The information kiosk at the north end of the *University of Idaho Arboretum and Garden* was constructed in 1997 with funds provided by Leonard Halland. Leonard was a physics professor who graduated with a bachelor's degree in Mechanical Engineering in 1919, and went to work at the University in 1920 until he retired in 1960. He died in November 1997 at the age of 104. Most of his career was spent in charge of the campus physics laboratory. According to the December 1997 issue of ArborNotes, the kiosk was designed by Larry Chinn, Principal Architect for UI Architectural and Engineering Services, and constructed by various UI Facilities Management shops after the concrete core was completed by A&R Construction of Lewiston, ID. The original keystone block retaining wall and brick pavers were updated in 2019 to match the new installation honoring Dr. Richard Naskali and the rock work across the road honoring long time Arboretum volunteer, Dean Vettrus.

Zinnias

Let me introduce you to the University of Idaho Arboretum and Botanical Garden annual of the year – the zinnia. Big or small, but always hardy and beautiful, zinnias are easily recognizable by their solitary composite flowers that come in a variety of colors. Most varieties of genus Zinnia are native to scrub and dry grasslands stretching from the Southwestern United States to South America.

The genus name *Zinnia* was chosen by botanist Carl Linnaeus to honor the German Master Botanist Johann Gottfried Zinn (1727–59). Zinn was the Director of the University of Göttingen Botanic Garden and took an interest in zinnias, crossing types and coming up with many new hybrids.

The genus Zinnia is a group of plants in the tribe *Heliantheae*, the third largest tribe within the *Asteraceae* family of plants. Genus Zinnia has about 22 species of annuals, shrubs, and sub-shrubs, many of which look nothing like the round flowers in crayon-colors you find at the big box stores. The most common zinnia varieties are hybrids that have been bred for specific qualities such as height, color, or bloom type, with well over 100 cultivars being produced since selective breeding started in the 19th century.

Zinnia peruviana was introduced to Europe in the early 1700s. Introduced around 1790, Zinnia elegans (also known as Z. violacea) was a simple flower with a single row of ray florets, which were violet. In 1829, scarlet flowering zinnia were available under the name Z. elegans 'Coccinea'. Coming from India in 1858, double flowering types in a range of colors, including shades of reds, rose, purple, orange, buff, and rose stripped became widely available.

Types of zinnias

Zinnia's composite flowers are made up of disk florets surrounded by ray florets, which may be different colors. Zinnias have a wide range of forms, from a single row of petals to dome shaped, and the petals themselves also come in a fantastic array of shapes. Colors range from white to chartreuse, yellow, orange, red, lilac, and purple. Sandpapery, pale to medium-green leaves are held opposite of each other on the stem, are usually *sessile* (stalkless), and range in shape from linear to ovate.



Zinnia marylandica 'Zahara Double Fire' and friends Swallowtail Garden Seeds | 2023



UI Arboretum | Dr. R.J. Naskali | 10/9/1999



UI Arboretum | P. Warnick | 10/19/2022

Within most grown varieties of zinnias, you will find different bloom types:

- *Single* flowers have one row of petals around the visible center of the flower.
- *Semi-double* flowers have two or three rows of petals around the center of the flower and have a visible center.
- *Double* flowers have multiple rows of petals around the center which completely hide the center.
- *Cactus-type* zinnias have petals that are rolled or quilled, resulting in tubular, spiky petals.
- *Dahlia-type* zinnias have double blooms which are dome-shaped, many of which resemble dahlias.
- *Beehive type* zinnias are double-flowered zinnias with rows of petals that form a beehive-shaped stack in the center that resembles a beehive.
- *Button type* zinnias have very small but plentiful flowers that look like flattened beehive-types.

Zinnias are perennial where they are native but are not frost-tolerant, and so are used as annuals elsewhere. They easily withstand hot summer temperatures and are easy to grow from seeds. They should be grown in fertile, humusrich, and well-drained soil, in an area with full sun, where they will bloom all summer long.



Zinnia haageana 'Aztec Burgundy bicolor' – also known as Mexican zinnia Swallowtail Garden Seeds | 2023

Zinnias are best planted in the spring in full sun. They can take a few weeks to become established, but once it warms up expect them to bloom from late spring through fall. Zinnias are very drought tolerant and only need an occasional feeding with a well-balanced fertilizer. No matter which type of zinnia you decide to grow in your garden, remember to keep them deadheaded for maximum bloom production.

It is rare for zinnias to be bothered by insects and most four-footed animals show no interest in them. Some varieties can be very prone to powdery mildew, which is unsightly but rarely harms plants. Other problems, though rare, include bacterial and fungal spot diseases and bacterial wilt. Minimize wetting foliage and space plants properly to avoid diseases. Caterpillars, mealybugs, and spider mites may also cause problems. Some leaf damage is not an issue, so avoid spraying unless there's a true infestation. Scientific studies have shown that zinnias can be used as a defense against whiteflies, making them a beneficial companion plant when inter-cropped with other plants in your garden.

Here are a few of the more commonly available species of *Zinnia*, each with its own unique features and tolerances:

• Zinnia elegans is the most commonly available species and what you will find in most nursery and seed catalogs. Also known as garden zinnia, flower



farmers and florists often work with this species as plants produce long stems and long-lasting flowers that can stand on their own in an arrangement or act as filler flowers. *Z. elegans* varieties reach between two- and four-feet tall with multiple rows of petals and bright colors ranging from white to yellow, orange, red, pink, and purple.

- Zinnia haageana are a gorgeous, smallbloomed, fast-growing type of zinnia also known as Mexican zinnia. A prolific bloomer, Mexican zinnias produce dozens of stems that have small, one-inch blooms in reds, oranges, and yellows. Some blooms are variegated, showing two colors on each petal. Most varieties of *Z. haageana* grow to 16- to 24-inches tall, are easy to grow, and lowmaintenance. They make excellent cut flowers, and their smaller size makes them a great filler flower, adding color to any flower arrangement.
- Zinnia peruviana, also called Peruvian zinnia, is a heat- and drought-tolerant type perfect for hot, dry climates. This native of South America has flowers only one- to two-inches in diameter. Most flowers are scarlet red with a brown center and attract many kinds of pollinators. Peruvian zinnias reach about two feet tall, and the flowers are excellent for cutting.



- Zinnia augustifolia is also known as narrowleaf zinnia. These plants are six-inches to one-foot tall and can spread up to three-feet wide. Small, daisy-like flowers that are usually single, top out at one- to two inches wide, and are most often seen in shades of yellow, orange, and red (although some white varieties exist). Z. augustifolia is more resistant to powdery mildew than Z. elegans and hybrids between the two species carry this resistance. Its spreading habit makes it a good candidate for hanging baskets and along walkways and in borders.
- Zinnia grandiflora is a tough species also known as prairie or wild zinnia. It is heat- and droughttolerant and, unlike other zinnias, is used as a perennial. Z. grandiflora produces short, compact plants, growing to six- to eight-inches tall with woody stems and narrow leaves. The single flowers are yellow with an orange-yellow center and form clusters across the shrubby plant. This hardy perennial is great for water-wise gardens.
- Zinnia marylandica includes the 'Zahara' and 'Zydeco' series of zinnias. 'Zahara' series zinnias are easy to grow, and are heat, drought, and humidity resistant. They grow 16- to 20-inches tall and are continuously covered in vibrant 2¹/₂ inch blooms. These are tough plants, ideal for hot, sunny, dry areas, and are highly resistant to mildew and leaf spot.

The 'Zydeco' series zinnias won the 2022 Greenhouse Grower's Reader's Choice Medal of Excellence Award. This variety of zinnia will thrive in gardens anywhere, especially in hot, humid, southern climates where other zinnias may struggle. Fully double flowers in bold, bright colors cover bushy, low-branching 12- to 20-inch plants.

Zinnia is a vast genus of plants and is more remarkable, adaptable, attractive, and valuable than most people would ever guess. Look for a curated selection of zinnias at the UI Arboretum annual beds this summer and enjoy the varieties of this wide-ranging, beautiful species of flowering plants.

Yvonne Barkley, UI Arboretum Associates Member-at-Large, UI Arboretum and Botanical Garden

mia elegans 'Zinderella Orange' – scabiosa-type zinnia | Swallowtail Garden Seeds | 2023

Report from the Horticulturist

The fall and winter weather have dictated operations in the Arboretum. This year, much like last year, winter slammed in early with snow and cold in November and December, then mostly disappeared.

The most visible effect from that was lots of leaves frozen on trees before they dropped. When that happens, the leaves tend to turn an ugly brown color and hang on much longer than usual. As in most things scientific, there is a specific, complicated word for that, *marcescence*, which literally means 'shriveled, but persistent.' Normally when leaves drop in the fall, the tree grows a new layer of cells at the junction between the branch and the leaf stem called the *abcission layer*, separating the leaf from the branch and allowing it to fall off. When there is a sudden, unusual cold snap abcission cells freeze, stopping the process. Leaves continue to hang on the tree until the stems dry out enough to snap off on their own. Some trees, most notably oaks and hornbeams, exhibit marcescence every year and don't drop their leaves until late winter.

This year, we ended up with dramatically more leaves on trees through the winter, turning leaf cleanup into a winter/spring project. Whenever possible we mulch leaves using the mulching blades on our large commercial lawn mowers, which finely chop the leaves. The chopped leaves mostly disappear into the turf and decompose to add nutrients to the soil.



Mulching oak leaves | P. Warnick | 02-03-2023

Winter is also the time to catch up on neglected office work, probably most importantly, updating the Arboretum's plant database. We use a database specifically developed for botanic gardens, called BG Base. The database allows us to keep track of all the plants in the Arboretum, including their name, source, and when and where they are planted. Each type of plant that is obtained from the same source is called an *accession* and given a unique seven-digit accession number. The first four digits of the number are the year it was planted, the next three digits are assigned in sequence as the plants are planted each year. For example, Syringa vulgaris 'Frank Klager' accession number 2005042 refers to 'Frank Klager' common lilac, the 42nd plant planted in 2005. After updating the database with the new 2022 additions, there are currently 3,866 accessions in the collection consisting of 21,839 individual plants.

The other major winter project is the constant struggle to maintain the labels in the Arboretum. We are trying a new system this winter. Before this year our primary labeling was done with credit card sized aluminum labels embossed with the accession information. Bronze colored labels were chosen, presumably because they would blend in the best with the natural colors of the bark. It has always been a hassle to get the list of labels formatted and sent off to the embosser, and with minimum order requirements we could only do it once a year.



New accession label | P. Warnick | 02-17-2023

May 2023

After looking into possible ways to do the labels ourselves, I found some other Arboreta trying printed plastic labels stuck onto aluminum blanks. The label manufacturer claims a minimum ten-year life span for their product, and the printer was reasonably priced. Printing our own labels also allowed us to change the font to allow us to italicize scientific names. Unfortunately, another problem arose, in that none of the suppliers I could find were making the bronze-colored blanks anymore. Apparently, the color was impossible to match consistently (which I had noticed over the years from our embosser), so they decided not to do it anymore. After looking at some options, we decided to go with gold-colored labels - partly because the black printed labels show up well on them, but also partly for the 'Vandal Gold' connection. So far, we have created a couple hundred labels and are happy with how much more legible the labels are as well as how convenient it is to produce them as needed.

With mild weather in January and February we were able to get outside and do quite a bit of clean up and pruning that often does not get done until later in the spring. Hopefully, that will mean things will happen at a more controlled pace when spring arrives, but realistically there will still never be enough hours in the day to do everything that needs to be done in April and May.

As always, none of this would happen without the support of individual donors. Everything in the Arboretum has been obtained as a gift to the University, and donations are what allow us to continue to improve the collections and strive to maintain the current level of maintenance in these times of ever-increasing costs.

> PaulWarnick, Horticulturist, UI Arboretum and Botanical Garden

Spring in the Arboretum (cont.)



Shattuck Arboretum | P. Warnick | 05-14-2018



'Red Grace' Peony | P. Warnick | 05-30-2018



Hosta | P. Warnick | 05-09-2018



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Renew your annual contribution to the UI Arboretum Associates for Fiscal Year 2023 and contribute to your favorite project fund. Contributors receive our periodic ARBORNOTES. Please mail your tax deductible contributions to: Arboretum Associates, University of Idaho, 875 Perimeter Drive MS 3143, Moscow, ID 83844-3143.

OR Renew your annual contribution using the secure University of Idaho online gift form. Go to <u>uidaho.edu/giving/make-a-gift</u> and search for "Arboretum Associates" when selecting a fund. *Thank You!*

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