Forest Bathing
A Mindful Walk in the Woods

By Kyla Sisson

The Garden has always attracted visitors who cherish it as a place to immerse themselves in nature, with no specific destination or plan in mind. Last season, a nature-centered health program came to the Garden, a series of guided walks known as “Forest Bathing.” Developed in Japan in the 1980s, it’s a mindfulness-based practice of taking in the sights, sounds, smells and textures of a natural place in a way that invites healing.

Kari Ramstrom, 2017 Garden programs coordinator, described the practice as “slowing down to the speed of nature.” She introduced the Forest Bathing program to share the benefits she experienced while walking and sitting quietly in the garden before work. “Not having an agenda, not identifying what I was seeing, but simply taking in the surroundings while fully embracing being in a place was transforming,” Kari said.

Participants were invited to experience the Garden with a more intentional presence and multi-sensory awareness than required on a trail hike or nature walk. Shelter volunteer Karen Sloey noted that on one walk the group laid down under the oak at the top of the prairie to watch the clouds. On another walk, they went barefoot. Observing movements in the forest, going on a nature treasure hunt and finding a “sit spot” by a favorite tree are other techniques used in these guided walks.

Scientific studies have linked Forest Bathing with significant health benefits, from reduced blood pressure and lowered stress hormones to a stronger immune system and a more positive outlook. Japanese researchers attribute some of these benefits to simply breathing in the forest air and absorbing the antimicrobial organic compounds known as “phytoncides” emitted by trees and plants.

Also called Shinrin-Yoku, which means “taking in the atmosphere of the forest,” forest therapy can be an experience led by trained guides or practiced solo by visitors to the Garden. For more information, check the website for the Association of Nature and Forest Therapy, www.natureandforesttherapy.org.

Kyla Sisson is an Interpretive Naturalist for the Garden. Her article appears courtesy of the Minneapolis Park & Recreation Board.
Dear Friends,

The 2018 Garden season is shaping up to be an exciting one as the wetland boardwalk moves toward completion this year. The boardwalk is a collaborative effort between the Friends of the Wild Flower Garden and the Minneapolis Park & Recreation Board, with the Friends providing partial funding and other support. Anticipating the Garden opening in April, the Friends Board met in early February to adopt our 2018 budget, review projects proposed by the Minneapolis Park Board for 2019 and consider several other measures.

We resolved to take steps to make The Fringed Gentian more widely available by including a clickable link to the newsletter on our website homepage. Navigate to www.friendsofthewildflowergarden.org and check out the newsletter online, alongside a trove of botanical information, Garden history and details about the Friends. Mindful of our mission as an educational and environmental organization, we are encouraging members to opt for electronic delivery of the Gentian over paper copies. A notice on this page tells how to make this change.

The Board also discussed the historic stock market correction that occurred on the day of our meeting in early February, and the potential impact of the new tax act on charitable contributions to the Friends organization. We are consulting with our financial advisor regarding our investments and although we are not concerned, we are looking at rebalancing and impact investing as appropriate responses.

THIRD GRADERS FROM BEST ACADEMY, a public charter school in North Minneapolis, follow Interpretive Naturalist Kara Snow down the Geranium Path in early May.

The 2018 Annual Membership Meeting of the Friends of the Wild Flower Garden will be held on Sunday, May 20, 3-6 p.m. in the community room of the Kenwood Park Center, 2101 West Franklin Avenue, Minneapolis.

All members and others with an interest in the Garden are welcome to participate, hear the latest news of Garden projects and Friends initiatives, and enjoy light refreshments with our Board of Directors. We look forward to having you join us!

At the Annual Meeting, all members in good standing will be entitled to vote for the Board of Directors for the Friends. Members in good standing are those who have paid dues as of their most recent renewal date. If you have questions about your membership status, please contact membership chair Jayne Funk at members@friendsofeloisebutler.org.

We are confident that our members and donors will continue their generous support of the Friends into the future. This year your financial gifts to the Friends will go dollar for dollar to funding the boardwalk completion and for plantings in areas of the Garden recently reclaimed from invasive species. Our administrative expenses will be covered by memberships and investment proceeds.

You may also designate a special purpose for your gift such as our Student Transportation Grant Program. The Garden was established through the dedicated efforts of Eloise Butler, a Minneapolis school teacher. The Friends honor those origins by funding the transportation program, bringing Minneapolis school students to the Garden for quality science-based education programs offered by the Minneapolis Park Board. We will continue the transportation program in 2018 and are exploring ways to encourage these students to return to the Garden with their families and friends as regular visitors.

We hope you will come often as well. I’ll be there, beginning in early April, hoping for a glimpse of the tiny snow trillium along Violet Way – one of my favorite ephemerals. As our new “Ask Eloise” column in this issue reminds us, “every tiny bloom and unfurling leaf is so remarkable after months of winter.”

Sincerely,
Kathy Connelly

Friends Annual Membership Meeting

OFFICERS AND DIRECTORS

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Invasive Plant Coordinators

| Liz Anderson | Kari Christianson |

Sign Up for Our e-Newsletter!

Make a no-cost gift to the Garden by checking off the email option for the newsletter on your next membership renewal. Email subscribers to The Fringed Gentian help us decrease our printing and mailing costs, reduce our use of valuable environmental resources, and allow us to direct more of your support to the Garden.

If you would like to switch to an emailed newsletter prior to receiving your renewal notice, or if you have questions about making this change, please contact Membership Chair Jayne Funk at members@friendsofeloisebutler.org. Members who already receive the Gentian by email have been very satisfied – photos are vivid, type size is easily enlarged, and there is no paper to recycle. We hope you will consider making this choice. Thank you!
Temperatures are dipping into negative digits and a healthy layer of glistening snow covers the landscape as I write these notes. It is late January and I’ve been out in the shining Garden this week working on a variety of projects. My first task was to stake out the next sections of the boardwalk in the Garden’s wetland with landscape architect James Robin and Minneapolis Park Board design project manager Tyler Pederson. Although more than one of us (I won’t say who!) temporarily lost our footing in the icy reaches of the open water below the snow, we successfully charted our way through the wetland with drawings, templates, tape measures and marking flags. Our field-proofing gave Tyler and James the information needed to update the design so that the final boardwalk segments are crafted to fit the space in a sensitive and sympathetic manner.

TWO DAYS LATER I was back in the Garden, but not for joyful work. Emerald ash borers, a nemesis of ash trees, are well established in Minneapolis and have been found in neighborhoods adjacent to Theodore Wirth Park and the Garden. We have been methodically removing specific ash trees in the Garden while they are still alive. Once infested, they are difficult to safely cut down without causing harm to nearby trees and shrubs. We don’t want to delay removal, as their branches will become brittle and break off, posing a hazard for visitors and staff. Working with Park Board forester Dana Hendrickson, we marked a number of mature ash trees growing next to the trail. Next week skilled Park Board foresters will carefully cut them down, branch by branch. This will ensure the safety of hundreds of nearby saplings and small trees planted during recent years to fill in the canopy.

ONE ASH IN PARTICULAR has made an impression on me. It is a green ash and Dana thinks it is between 40 and 50 years old. It stands like a soulful sentinel in the lowland forest of the Garden, watching over the not too distant wetland. Its rise to the canopy came after the fall of American and red elms, gentle giants that were once plentiful in this garden area. When these elms were lost to Dutch elm disease in the 1970s and 80s, the ash and box elders we see today quickly grew up. The more recent plantings of swamp white oak, cottonwood, silver maple, tamarack, river birch and yellow birch represent yet another generation in this forest’s life cycle. These newer trees are thriving, growing together with Kentucky coffee tree, red maple and black walnut. With the additional light they will grow even more quickly in the coming years.

TO FILL NEWLY OPENED SPACES, Garden staff will plant more trees and shrubs in this forested area, along with dozens of species of wildflowers, sedges, grasses and ferns in a variety of locations. Stop at the Visitor Shelter and consult the bulletin board to find out what is being planted where throughout the season.

THE GARDEN HAS A BRIGHT FUTURE – and as with any landscape, the plants and Garden spaces will keep growing, shifting and changing. As good gardeners and wise stewards, let’s continually return our attention to the opportunity that change affords. We can learn how to see deeply and be inspired by our observations to awaken and harness our creativity and biophilic intelligence – that innate tendency we have to seek connections with all of life. This is our challenge: to love nature enough to learn from it, to embrace the cycle of change and to foster the most beneficial and beautiful changes within our gardens and natural spaces.

Susan Wilkins is Garden Curator and her column appears courtesy of the Minneapolis Park & Recreation Board.
Were all species of plants now in the Garden present there originally?
No. At the end of Eloise Butler’s life, the Garden contained 1,137 species of plants, of which 710 species had been introduced by Eloise. She was an avid collector of plants and brought them to the Garden from wild areas such as Minnehaha Falls Park and Lake Minnetonka. She also traded plants, bought them from nurseries here and out east and rescued them from areas destined for improvement projects – vacant lots, ditches, creeks and ponds.

Which birds are around on April 1 when the Garden opens?
Winter visitors and early migrants might include red-breasted nuthatches, brown creepers, juncos, kinglets, hermit thrushes, fox sparrows and American robins. Year-round Garden residents are cardinals, blue jays, white-breasted nuthatches, chickadees, pileated woodpeckers and great-horned owls.

What wildlife can be seen in the Garden?
We have spotted or seen signs of chipmunks, coyote, fox, wild turkey, raccoon and more within our 15 acres. For updates on bird and wildlife sightings, consult the phenology notebook, the weekly Garden Highlights and the birding board in the Shelter.

What is your favorite time to visit the Garden?
Eloise loved every season in the Garden, so we asked Interpretive Naturalist Kyla Sisson: “I always say April – every tiny bloom and unfurling leaf is so remarkable after months of winter. Ephemerals are delicate heartbreakers, here and then gone, so come often if you want to see them. Blooms tend to open when the sun is out, and some buds open over the course of a day, so you may wish to visit on a sunny afternoon. But whether you see bloodroot still wrapped in its blanket of leaves or catch the brief three-day blooming of twinleaf, you will have witnessed something you might have missed on any other day.”

During the shorter, cooler days of spring, the chlorophyll in leaves may die faster than it can be produced. And in a woodland not yet leafed out, plants are blasted by more sunlight than they can manage.

Enter anthocyanin. This red pigment is able to lower the freezing point of water in plants as well as protect the leaves from light overload. Like having a salt shaker and sunscreen, anthocyanin can help some of the chlorophyll in these plants survive the vicissitudes of spring.

But there’s more to it. Leaves on trees are buffeted by wind, so when the temperature drops in the fall they cannot hold onto whatever warmth anthocyanin provides. The chlorophyll molecules break down even faster, and we can see pure red, without the blotchy “camo” effect.

Spring bloomers, on the other hand, grow low to the ground. With the aid of anthocyanin these plants are able to preserve some of their chlorophyll between glimmers of brilliant pigment. We are treated to a leafy kaleidoscope of red and green, and brown where the pigments overlap.

Diana Thottungal is a retired Garden Naturalist.
How Trees Think

The Hidden Life of Trees
by Peter Wohlleben
Greystone Books, 2016, $24.95

Reviewed by Caitlin Barale Potter

What is a tree? Is it a social being? Can it make decisions? What is a decision? Do you need a brain to make one? What is a brain, even? Peter Wohlleben’s bestselling book The Hidden Life of Trees: What They Feel, How They Communicate – Discoveries from a Secret World invites the reader to consider these matters and more. In 288 pages, the author takes us on a path through the woods and deep into the mind, heart and social life of trees. And once we’ve entered Wohlleben’s world, it’s impossible to look at a tree again in the same way.

Cedar Creek Ecology Book Club, a gathering of master naturalists, scientists, educators and self-proclaimed “regular people,” met recently to dissect The Hidden Life of Trees. Most of us had deeply personal connections to specific trees or to particular tree species, and so we began our conversation by talking about our favorite trees – majestic and memorable conifers like white pine and cedar, and deciduous trees – maples with their fiery fall foliage, the unique ironwood and shagbark hickory, and the drama and mystery embodied by an old, gnarled, open-grown bur oak.

As we shared our tree stories, we realized that reading The Hidden Life of Trees had led many of us to look at our beloved trees from new angles. We started thinking about how a tree shares information with its neighbors, how it makes decisions about water and nutrients and insect attacks, whether it’s a risktaker or a bet-hedger, the level of parental care it provides its offspring, and how a forest handles immigrants. We also found validation in the book for the feeling of loss many of us experience when a tree we are close to dies or is cut down.

Some of the terminology the author employs, the “anthropomorphic fluff” our book club readers commented on, reflects the limits of our language to convey information as foreign to the human experience as the internal life of trees. We literally don’t have the words to describe many characteristics and behaviors without anthropomorphizing when we find them in non-human entities. For example, how do you describe a personality when “person” is embedded in the word? “Stable individual differences” doesn’t quite capture the same thing.

Wohlleben expertly takes on the challenging task of serving as translator and advocate for the intelligent and profoundly social organisms we call trees. A former state forester in Germany, Wohlleben is an engaging storyteller, weaving together tree botany, land management and forest ecology with magic, mystery and inexhaustible curiosity. He doesn’t shy away from the technical nitty-gritty of the science, but provides context for it in a tale that is both enchanting and accessible.

Dr. Caitlin Barale Potter is an ecologist and environmental educator who coordinates public programs at Cedar Creek Ecosystem Science Reserve in East Bethel, Minn. The Cedar Creek Ecology Book Club meets the 4th Wednesday of each month. For a schedule of book discussions and other activities, go to www.cedarcreek.umn.edu/upcoming events.
In recent months, the Friends Invasive Plant Action Group (FIPAG) has been working in the maple bowl just south of the Garden, removing invasive plants from this remnant of Minnesota’s Big Woods. The thick understory of buckthorn is being doggedly uprooted by FIPAG volunteers, allowing the vibrant assortment of sugar maples, red maples, dogwoods, cherries, and other species in the area to thrive and repopulate.

During a recent walk through these woods, I wondered how the trees survive the bitter cold blasts of artic air that we experience when the polar vortex dips down into Minnesota. Trees are up to 50 percent water. Why doesn’t all this water freeze, killing the tree? And how do the trees manage to survive dehydration when they have no opportunity to absorb water?

In warmer months a tree’s leaves are beneficial for capturing sunlight and circulating rainfall taken up by the roots, but in the winter, they provide a large surface area for evaporation. By dropping their leaves, deciduous trees guard against dehydration.

During a tree’s winter dormancy, fascinating things happen at a cellular level. Plant physiologists tell us that trees protect their living cells from freezing and dehydration through “cytoplasmic vitrification.” As a tree prepares for winter, its cell membranes become more flexible, allowing water to escape. The fluid that remains in the living cells is “sweetened” as starch is converted to sugar, creating a natural antifreeze. The water that has migrated outside the living cells does indeed freeze, since its sugar content has not increased, but the ice crystals in this frozen water don’t puncture the more pliable membranes of the living cells.

The liquid that remains in the living cells becomes so viscous that it appears to be solid, in a way similar to glass, which is neither a liquid nor a solid but instead an amorphous solid. This “vitrification” or glass-like state allows the super-cooled contents of the tree’s living cells to avoid crystallizing during the winter. Read more about this process at www.frontiersin.org/articles/10.3389/fpls.015.00884/full and www.researchgate.net/publication/223365008.

These cellular processes reverse as the days grow warmer and longer. When the trees in the maple bowl break dormancy, new garlic mustard seedlings will be emerging. By mid-summer, these seedlings will have formed a low, mounded rosette, and those plants that survive retain their green leaves even through the winter. Interestingly, garlic mustard does not break down its chlorophyll and will continue to photosynthesize during periods when the temperature is above freezing. With this head start over spring wildflowers, biennial garlic mustard is ready to bolt upwards during its second year as soon as the weather warms, flowering and seeding prodigiously and spreading rapidly.

Not only does its aggressive growth crowd out woodland plants and tree seedlings, garlic mustard disrupts the food supply as well. Its roots release a chemical into the soil that destroys the fungal organisms that help many of our native plants and trees take up water and nutrients. And thus, FIPAG will be back on task in the maple bowl this spring. Join us in May and June to pull garlic mustard and watch the trees wake up from their sweet freeze.

Garlic Mustard Pull Dates:
- Saturday May 5
  2:00-4:30pm
- Sunday May 20
  2:00-4:30pm
- Sunday June 3
  2:00-4:30pm

Kari Christianson is an Invasive Plant Coordinator for the Friends Invasive Plant Action Group. To reach FIPAG, email invasives@friendsofeloisebutler.org.
Memorials and donations to the Friends are tax deductible and constitute an important part of keeping the Garden a special place for generations of people to enjoy. In 2018 undesignated donations will be used for the Student Transportation Grant Program and for phase II of the wetland boardwalk. Project update information is on the Friends website. An acknowledgment of donation will be provided to all donors.

Note on Memorials: Please give a name and address for the person honored, or their family, so that we can acknowledge to them that a memorial has been received. Memorials and donations should be sent to: Friends of the Wild Flower Garden, P.O. Box 3793, Minneapolis MN 55403. Checks are payable to Friends of the Wild Flower Garden, or donate on our website, www.friendsofthewildflowergarden.org

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Membership Form

Memberships can be ordered online at www.friendsofthewildflowergarden.org or mailed with a check payable to:
Friends of the Wild Flower Garden
Membership
P.O. Box 3793
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Please specify if the membership is a gift.
Each membership is tax-deductible to the extent allowed by law.

Donations and Memorials Form

Donations:

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Grow Your Legacy: Remember the Garden in Your Estate Plan

Please consider a gift in your estate plan to benefit the Garden. Gifts to Friends of the Wild Flower Garden are tax deductible to the full extent allowed by Minnesota and federal law for gifts to charitable organizations.
Friends of the Wild Flower Garden has been approved by the IRS as a 501(c)(3) charitable organization since 1953.
Gifts can be made through your will, revocable living trust, retirement plan or life insurance. Leave a gift for the Garden in your will or revocable living trust by a provision such as “I give $______ to Friends of the Wild Flower Garden, Inc., to benefit the Eloise Butler Wildflower Garden.” Or name Friends of the Wild Flower Garden as a beneficiary of a portion of your life insurance or retirement account.

If you have questions, please call Friends Board member Steve Pundt at 612-333-1900 or email steven@pundtlaw.com. Thank you for helping us fulfill our mission to preserve and protect the Garden!
The Eloise Butler Wildflower Garden and Bird Sanctuary comprises cultivated but naturalistic woodland, wetland and prairie environments, 2/3 mile of mulch covered pathways and a rustic shelter where educational programming and materials can be found. It is the oldest public wildflower garden in the United States, established in 1907. The 15 acre site is located within the city of Minneapolis and is owned and operated by the Minneapolis Park & Recreation Board. The Garden is open from April 1 through October 15 from 7:30 A.M. to a half hour before sunset. Weekends only October 15 to October 31.