



TWINLEAF NEWSLETTER

Wisely and Innovatively Stewarding the Preserve's 'Deep' Ecosystems

"This place is deep."

That is what a site auditor for the American Alliance of Museums told Dr. Patricia Ludwig, BHWP's board chair, and Executive Director Miles Arnott three years ago during a tour of the Preserve.

"He was accustomed to visiting horticultural display gardens that were visually appealing, important to the community and offered valuable educational programs to the public they serve," says Arnott. "The Preserve is certainly all of those things, but our mission, our educational programs and our land stewardship reflect a deeper calling which speaks to conservation and ecology in a way that few other botanical gardens do."

In particular, the Preserve's land stewardship practices are representative of our ongoing commitment to a healthy and diverse natural world. The 134 acres that comprise the Preserve form a complex web of geology and native plant communities that, in turn, support a rich diversity of insects, birds and other animals.

The front meadow, rich in native grasses and perennial flowering plants, is a haven for pollinators and bird species that rely on just that kind of habitat. Preserve staff used to mow the meadow once per year in late winter—standard practice for established meadows in our eco-region.

However, over the years our management protocol has evolved into a much more nuanced approach. For example, instead of mowing all of the meadow each winter, we leave rotating patches untouched in order to allow insect egg cases and butterfly pupae to remain undisturbed—providing a natural "insurance policy" for these important insects to repopulate each spring.



Recently, we also purchased a "flail mower" that does a better job of cutting the dried meadow vegetation into smaller pieces and minimizes large swaths of grass that simply got knocked over and matted down by our old brush hog. We hope that this will help us manage the Indian grass (*Sorghastrum nutans*) which, if left unchecked, can exclude other desirable plants such as milkweed (*Asclepias spp.*) and bergamot (*Monarda spp.*). Learning from experience, each year we refine our approach.

Penn's Woods is another example of how the Preserve's land stewardship practices have progressed. From its beginnings in 1944 as a memorial reforestation project (really an arboretum project in an old field), Penn's Woods has changed dramatically. The open forest floor concept common to arboretums was formerly maintained in Penn's Woods by mowing the entire area each spring.

In 2002, however, the Preserve abandoned that practice of doing mechanically, with a lawnmower, what the deer were doing outside of the fence—and instead allowed the understory to recover. We are learning how the succession process takes place in this particular forest and are working to direct the long-term trajectory of the ecosystem to maximize diversity. This long-term experiment will measure its results across decades and even centuries as the forest evolves and changes.

These are just two examples of how the Preserve stewards the many microhabitats and ecosystems of this special place. "These efforts represent a deliberate collaboration between the collections, property and education teams of the Preserve as we research, try new things and learn," says Arnott. "While some of what we do to manage the Preserve is established protocol, much of it is new and innovative."

"We are also committed to sharing what we are learning about land stewardship with other organizations and the broader conservation community—including interested land owners—in pursuit of a healthy and diverse natural world."



**Bowman's Hill
Wildflower
Preserve**

Twinleaf Newsletter

Bowman's Hill Wildflower Preserve
PO Box 685
1635 River Road
New Hope, PA 18938-0685

Phone: 215.862.2924
Fax: 215.862.1846
Website: bhwp.org
Email: bhwp@bhwp.org

The Preserve is located 2 ½ miles south of New Hope, Pennsylvania, at 1635 River Road (Route 32). Open year-round.

Visitor Center and Twinleaf Book & Gift Shop

Open Monday, April through June, 9 am – 5 pm
Open Tuesday through Sunday, 9 am – 5 pm
Open Memorial Day and Labor Day
Closed Thanksgiving Day and Christmas Eve through New Year's Day.

Admission

Preserve Members: FREE
Non-Members: Nominal fees

Staff

A. Miles Arnott, Executive Director
Marin A. Byun, Nursery Assistant
Marilyn Can, Visitor Service Associate
Julia Dare, Development Associate
Jake Fitzpatrick, Nursery Manager
Rick Fonda, Grounds Manager
Rich Gallagher, Facilities & Maintenance Coordinator
Lisa Garvey, Twinleaf Shop Assistant
Susan Harrington, Business Manager
Jason Ksepka, Curator
Laurie Lanning, Visitor Services Coordinator
Santino Lauricella, Adult and Professional Program Coordinator
Regina Moriarty, Volunteer Coordinator
Sue Owens, Bookkeeper
Maggie Strucker, Interpretive Coordinator
Holly Udell, Bookkeeper
Kellie A. Westervelt, Development Director
Richard Yahn, Facilities Rental Coordinator

Mission

Bowman's Hill Wildflower Preserve inspires the appreciation and use of native plants by serving as a sanctuary and an educational resource for conservation and stewardship.

Bowman's Hill Wildflower Preserve is managed by the nonprofit Bowman's Hill Wildflower Preserve Association, Inc., in cooperation with the Pennsylvania Department of Conservation and Natural Resources. A copy of the official registration and financial information may be obtained from the Pennsylvania Department of State by calling 1.800.732.0999. Registration does not imply endorsement.



More sustainable, biodegradable coconut husk pots are planted directly in the ground.

Director's Message

Preservation has been in the Preserve's DNA since our inception in 1934. The founders of this special place set the Preserve aside for future generations to learn from and enjoy. With the tools and framework available to them in the midst of the Great Depression, they set up a long-term organizational structure to ensure its sustainability. That framework has changed and adapted over time. Yet today, 85 years later, our board, staff and volunteers continue to look for ways to ensure that the Preserve thrives for years to come—and contributes to the greater good of conservation through the adoption of sustainable practices.



Sustainability is the "avoidance of the depletion of natural resources in order to maintain an ecological balance." It is a mindset—a way of viewing the world that values our collective resources and strategically plans for their long-term protection. Those resources can be cultural, financial, educational, institutional and, most apropos to the Preserve, environmental.

You can see evidence of the Preserve's commitment to sustainability through our land stewardship activities (see Page 1) and through changes in how we strive to conserve our finite resources in our daily activities. We started small with recycling and composting, and are now committed to reducing the use of plastic pots in the Native Plant Nursery by growing many of our plants in biodegradable containers that can be planted directly in the ground. The harvesting of peat moss is an unsustainable and environmentally degrading process, so we are exploring options for using a peat-free planting medium that will sustain the planet while nurturing our native plants.

We've also eliminated single-use plastic water bottles in our Twinleaf Book & Gift Shop and replaced them with reusable water bottles. And we will continue to explore other areas and bring them into our way of working.

As a member of the Preserve community, you value our history of preservation and our commitment today to utilize sustainable approaches. That makes you a key stakeholder in the all-important effort to ensure that the Preserve will be here for generations to come. Your membership and Annual Fund support allow us to sustainably steward this amazing place and give us room to innovate, learn and share our knowledge with others. You are part of this evolving and unique place that is making a positive change in the world!

Miles Arnott,
Executive Director

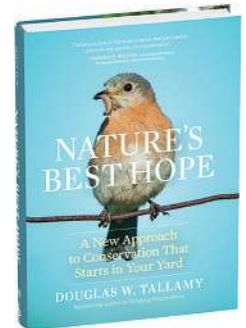


Members and staff participating in a butterfly count at the edge of the meadow.

Recommended from the Twinleaf Book & Gift Shop

PRE-ORDER YOUR COPY OF DOUG TALLAMY'S NEW BOOK NOW

Ten years after the release of his revised, best-selling "Bringing Nature Home," early next year Douglas W. Tallamy's latest book will be published.



"Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard"

demonstrates practical, effective and easy ways you can use native plants to turn your property into a conservation corridor that provides wildlife habitat.

Call the Twinleaf Book & Gift Shop at 215.862.2924 to reserve your copy now.

Help Our Annual Fund Drive Finish Strong

As our 2019 Annual Fund Drive draws to a close, we're counting on your support to help us meet our goal. Please consider a year-end gift to the Preserve so we can hit the ground running in 2020. The Annual Fund supports everything that we do here at the Preserve. It protects our blooming meadow filled with pollinators, our sparkling ponds teeming with frogs, turtles and dragonflies, and our majestic forests with their soaring raptors and migrating songbirds. It underwrites our Native Plant Nursery and propagation efforts, so that native plants can find homes in the surrounding community beyond our fence. It helps fund our educational programming, allowing children and adults alike to experience the wonder of nature and understand the world around them.

Your year-end gift helps us formalize plans for new initiatives and strengthens our existing programming. It supports our stewardship and keeps this important place thriving. We're counting on you to help us close out the year on top with a final gift to the 2019 Annual Fund.

By donating to the Annual Fund, you help keep this a special place to experience what's natural and learn what's native. Gifts are acknowledged in the *Twinleaf Newsletter* and gifts of \$100 or more are recognized on the Annual Fund board in the Visitor Center. We've enclosed an envelope for your convenience, or you can go online at bhwp.org/donate-now to give a gift to the 2019 Annual Fund. Thank you for your support of this wonderful community of plants, animals and people.

LAST-MINUTE GIFT IDEAS

Stop by the shop for a variety of nature- and winter-related items, including T-shirts (both short- and long-sleeved), jewelry, note cards and much more.

CHILDREN'S BOOKS

Give the gift of nature to your children and grandchildren. The shop has a variety of award-winning children's books that will help you and your family engage in nature's wonders. Titles include "The Family Butterfly Book," "The Curious Nature" and "The Life Cycles of Butterflies." We also have beautiful nature-themed Peterson Field Guide Coloring Books.

Keep in mind that members always enjoy a 10% discount on regular purchases. Every purchase from the Twinleaf Book & Gift Shop also further supports the Preserve.



GIVE THE GIFT THAT KEEPS ON GREENING— A MEMBERSHIP TO THE PRESERVE.

To purchase a gift membership, contact Development Associate Julia Dare at 215.862.2924 x113 or dare@bhwp.org.



A Tribute To Dave Shanno

The Preserve is mourning the July passing of Washington Crossing resident Dave Shanno, a highly dedicated member and propagation volunteer since 2002.

“Dave was a wonderful, interesting man who I looked forward to seeing every week at the prop table,” says volunteer Rob Barrett. “He lived every day with a zest and curiosity that I truly admired.”

“Dave was a staple of the prop volunteers,” adds Jake Fitzpatrick, the Native Plant Nursery manager. “Also, he often donated funds for nursery-specific projects.”

After earning his BA from Yale University and his PhD in applied mathematics from Carnegie-Mellon University, Dave conducted trailblazing research in applied mathematics while serving on the faculty of the University of Chicago, University of Arizona, UCal-Davis and University of Toronto. In 1986, the Hazelton, PA, native returned east to teach at Rutgers University, where he remained until his 2008 retirement.

“He was always someone you could turn to for help or advice,” says Fitzpatrick. “He is certainly missed.”

Preserve Welcomes New Adult Educator

Santino Lauricella, an experienced environmental educator, joined the Preserve this fall as our new adult and professional program coordinator.

I want everyone to have the same passion and understanding of native plants and wildlife that I have.

“I’ve fallen in love with the Preserve’s landscapes and diverse microbiomes,” says Lauricella. “I want everyone to have the same passion and understanding of native plants and wildlife that I have.”

For the past four years, Lauricella was the environmental educator and education coordinator for the Ned Smith Center for Nature and Art in Millersburg, PA. Previously, he was a naturalist and outdoor educator at the Outdoor School in Horsham, the Watershed Institute in Pennington, NJ, and a Berks County YMCA camp.



A native of upstate New York, he graduated magna cum laude with a BS in wildlife science from the SUNY College of Environmental Science and Forestry in Syracuse. Prior to becoming an environmental educator, he conducted research involving desert tortoises, bog turtles, coyotes and least terns.

Mary Ellen Sibley: An Invaluable Insider

Mary Ellen Sibley is proof that you don’t have to get your hands dirty potting native plants to be a valuable Preserve volunteer. The retiree, who lives in Morrisville, used to handle intercompany billing for GE Telecommunications.



Since May 2014, she has assisted the Preserve’s development and volunteer staff once or twice a week. Her duties include ensuring that membership information packets are received promptly by new and renewing members; mailing requests for the annual fund campaign; and tracking the thousands of hours that the Preserve’s 200 volunteers contribute each year—an impressive figure that helps support grant requests.

One of her favorite places at the Preserve is the Pond. “It’s a relaxing place where I can go to sit and enjoy nature.

“I also like the camaraderie here,” she adds. “It’s like my family, like my second home. The staff and volunteers are so welcoming, and everybody is excited about the Preserve and what’s happening here.”



Grant Support for the Preserve Makes a Big Difference

The Preserve has received several grants this year that have fueled projects such as Aquetong Meadow, improvements for the Penn's Woods Trail, hardwired internet service and the development of a visitor experience interpretive plan.

Aquetong Meadow is really starting to take shape, with the results of seeding from the spring already starting to show. Over 90 pounds of seed representing 91 native meadow species was sown using a drill seeder. Foxglove, beardtongue, mountain mint, milkweed and golden Alexander are already peeking through the soil. Thanks to grants from the Bucks County Foundation, the Church and Dwight Employee Giving Fund, the Robert F. Schumann Foundation and Visit Bucks, we will get to see a cornucopia of black-eyed Susan, monkey flower and swamp milkweed blooming profusely in the spring.

Thanks to a grant from the Challenger Foundation, the Preserve is also working on its educational programming for the meadow and interpretive signage. Proceeds from the 2017 Spring Wildflower Gala and donations from the Lingohocken and Philadelphia garden clubs have also supported Aquetong Meadow.

A grant from the Community Foundations Partnership funded Penn's Woods Trail improvements, a gift from the Susan Rudolph Fund supported our cable internet installation, and the Pennsylvania Department of Human Services supported our interpretive plan. Thanks to them all for advancing the Preserve's ability to deliver on our mission.

We are deeply grateful to all of our wonderful funders who help the Preserve take great leaps forward in inspiring the use and appreciation of native plants and serving as an educational resource for conservation and stewardship.

2020 Spring Wildflower Gala to Benefit Youth and Family Programming

The Preserve's 17th annual Spring Wildflower Gala will take place on Saturday, April 25, 2020. Known as the "Best Party in Bucks," this black-tie-and-muck-boots fundraiser features silent and live auctions, spirited dancing, cocktails, guided walks that highlight the Preserve's spring wildflowers and a fabulous gourmet dinner by Max Hansen Caterer.

As our biggest fundraiser, the Gala helps support the Preserve's mission to inspire the use and appreciation of native plants and serve as an educational resource and sanctuary for conservation and

stewardship. The theme for next year's Gala is "Youth and Family Programming," with proceeds helping to expand the Preserve's educational offerings for our young visitors.

The Gala Committee is hard at work planning this spectacular event. Meetings take place monthly at the Preserve, with sub-committee meetings occurring as needed. If you're interested in joining this group of dedicated and enthusiastic volunteers, contact Development Director Kellie Westervelt at 215.862.2924 x105 or westervelt@bhwp.org.



SAVE THE DATE

5th Annual Designed for Nature Garden Tour

Saturday, June 20 | 10 am – 3 pm

Look for details at bhwp.org early 2020.

Curator's Notebook



When It Comes to Native Plants, Don't Go Dormant During the Winter—I Don't

Because I work outdoors, people often say, "You must hate winter because there's nothing for you to do."

"Actually, it's one of my busiest times of the year," I respond. "There's plenty for me to do and consider, and you should do the same."

In my case, as the Preserve's curator, I am still collecting seeds that have dried on the plants even into February. And with the help of some of our propagation volunteers, I also spend a lot of time during the winter both cleaning the tens of thousands of seeds we have collected and preparing them, through cold stratification (see opposite page), for sowing in the spring.

There are also several key things that home native plant gardeners can—and shouldn't—do:

USE DISCRETION IN CLEANING UP YOUR NATIVE PLANT BEDS

Here at the Preserve, we let most dead plant material remain in place. The impulse to clean up your native plants over the winter is understandable, but hold off until at least March:

- Leaving dead leaves and foliage in place will insulate your plants, protecting them from winter's cold and drying winds, and provide additional shelter for insects and small mammals.
- Let at least some flower heads and stems remain through the winter. Native bees overwinter in plant stems, and native birds such as American goldfinches rely on sunflower and coneflower seeds during the lean months.

Come March or even early April, when you begin your spring cleanup, you'll see that your seed heads have been picked clean by the birds. Be proud that what others might consider an eyesore illustrates the fact that you have a well-functioning ecosystem on your own property.

SCATTER SEEDS WHILE IT'S STILL COOL

If you have some native plant seeds you want to plant next year, some might think it would be best to do so after it warms up—as you would with vegetable seeds. But with warm spring temperatures, you risk having the seeds dry out if you scatter them on the surface.

In addition, to best germinate, native plants ideally undergo a period of stratification that includes weeks of cold temperatures. So, if you don't want to chill them in your refrigerator, one option is to scatter them when it's still cold in February or early March. Nighttime frosts and daytime thaws will cause your soil to heave and move your seeds safely into the soil.

BONE UP ON NATIVE PLANTS

Finally, I find that the winter is a great time to learn more about native plants. Attend the Preserve's winter lecture series, read a good book or guide to deepen your knowledge, and plan your 2020 steps to transition your landscape to a more natural, native environment.

—Jason Ksepka, Curator



Goldenrod (*Solidago* spp.) ball gall



Dark-eyed junco (*Junco hyemalis*)

Photos by Mary Anne Borge



A garden for wildlife at the Lambertville Public School (LPS). The collaboration between the Preserve, Lambertville Goes Wild and LPS was a Plant Grants program prototype. Photo by Mary Anne Borge

Plant Grants Will Spread Native Plants Throughout the Region

The Preserve is developing a grant program to expand our reach throughout the greater Delaware Valley. Although we would like everyone to visit the Preserve and our Native Plant Nursery, the Preserve's new Plant Grants program will increase access to and enhance knowledge about native plants in nearby communities.

Community groups, nonprofit organizations and agencies such as public libraries and schools will soon be able to apply for up to 100 native plants. Each grantee will be awarded a diverse mix of plants appropriate to the conditions they describe in their

grant application. These "starter gardens" can be used for projects like urban green space, community gardens, greenways and restoration projects.

Initially, the Preserve will set aside 1,000 native plants to donate to 10 grant recipients. Eligible projects will serve the public and have an educational component. In this way, the Preserve will encourage the transition to native landscapes, facilitate wide-ranging educational programming on native plants, and provide a little piece of the Preserve to communities throughout the region.

Stratifying Seeds over the Winter

One of the important steps of propagating native plants from seed is stratification. Stratification is the process a seed goes through after it is dispersed from the mother plant, and before it germinates. In our area this is most likely a period of sitting in soil through the winter months followed by germination in the spring. There are some variations depending on species, but this is the basic concept.

Many people are under the assumption that this is a period of "dormancy." On the contrary, lots of chemical or physical changes are happening to prepare the seed for germination. Instead of "dormancy," this is a "conditioning" period.

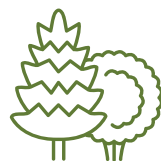
In cultivation, we are aiming to mimic this, or to hack it to serve our own schedule. There are a number of ways to accomplish this. Generally, you want to moisten the substrate, such as potting soil, to approximately the moisture of a wet sponge that is wrung out, so that no water drips when squeezed.

Now you can stratify your seeds in a Ziploc® bag or a pot in the refrigerator, in pots/trays outside in a protected site, or in the ground as nature would do. The amount of time to stratify varies. Thirty days is generally the minimum, but some other seeds require much more time. Most often, the safe duration ranges between 60 and 90 days.

Pawpaw (*Asimina triloba*) tree seeds ready for refrigerated stratification in two substrates, potting soil (left) and sand.



GO PAPERLESS WITH YOUR NEWSLETTER



Like you, the Preserve is committed to being as green and sustainable as possible. To reduce our paper usage and related costs, please consider only receiving your Twinleaf Newsletter digitally. To do so, contact Development Associate Julia Dare at 215.862.2924 x113 or dare@bhwp.org.

2020 Winter Lecture Series

Every Sunday in January and February, 2 – 3 pm

Enjoy energizing and enlightening experiences at our annual Winter Lecture Series. The series features presentations by regionally renowned experts who address a wide range of topics related to natural history, biodiversity, ecological gardening, native plants and native wildlife. All lectures are held in the Preserve's Visitor Center auditorium. This is a very popular series, so sign up early to ensure your place. Walk-ins welcome as space permits.

Members: \$10 per lecture, Non-members: \$15 per lecture

Special Offer!

Purchase a punch card for all eight lectures, get 20% off!

Members: \$64, Non-members: \$96

Each series punch card ticket entitles the holder to one admission per lecture. Purchase your full series in advance either online or by calling the Preserve, or coming in person prior to the first lecture. You will receive your series punch card at the first lecture you attend. Seating for all lectures is general admission; arrive early to get the seat of your choice.

Inclement Weather: If we must cancel or postpone a program, we will try to get the message out via Facebook and our website. We will try to contact pre-registrants through phone and/or email. Please check those sources before venturing out if there is doubt about the weather.

JANUARY 5

THE HEALING POWER OF NATURE

A scientist visits a hospital's nursery to spray pinene, the chemical that gives pine its scent. The babies, who haven't yet been outside, immediately calm, their blood pressure lowering. Patients who see a tree outside their room get better faster than those who don't. Nature heals. To take advantage of this, Philadelphia pediatricians are working with the Schuylkill Center for Environmental Education staff to *prescribe* nature time. So, what is the mounting evidence? And what are nature centers doing in response? Mike Weilbacher, director of the Schuylkill Center, presents the surprising evidence, plus an overview of pioneering programs his and other centers are developing.

Naturalist Mike Weilbacher is the executive director of the Schuylkill Center for Environmental Education in Philadelphia's Roxborough section. An award-winning environmental educator for 40 years, Weilbacher writes a weekly column for the Roxborough Review and is well known to public radio listeners as "Mike the All-Natural Science Guy" on the award-winning live children's radio show, "Kid's Corner" on WXPN.

JANUARY 12

FILM "THE KINGDOM: HOW FUNGI MADE OUR WORLD"

If you want to understand how plants found their way on earth, you won't want to miss this fascinating gem of a film created by Australian scientists and photographers. The film is a journey into the mysterious world of fungi. Witness their beauty (the time-lapse photography will amaze you), unravel their mysteries and discover how this secret kingdom is essential to life on Earth and may, in fact, hold the key to our future. Jim Bray, a Preserve naturalist, will moderate this must-see presentation.

Jim Bray has lived in Bucks County for more than 60 years. After retiring from his labor relations career with U.S. Steel, Bray pursued his passion for gardening and conservation. A certified master gardener, he is the past chairman of the Lower Makefield Township Environmental Council. Under his chairmanship, the township received several national and state awards, among them the 2008 Achievement Award from the U.S. EPA—the only community so honored in the Mid-Atlantic region—as well as the 2009 Pennsylvania Governor's Award for Environmental Excellence.

JANUARY 19

WILD EDIBLE PLANTS OF THE NORTHEAST

Many people don't realize they are surrounded by edible plants. Join Debra Naha-Koretzky, the Wild Edibles Lady, for a fun program that will open your eyes to the world of wild edibles. As she likes to say about invasives, 'If you can't beat 'em, eat 'em!' The program will include a wild tea tasting and attendees may also take home a wild recipe or two.

Debra Naha-Koretzky received her master's degree in clinical nutrition from New York University. She is a licensed dietitian nutritionist, a certified Rutgers master gardener, a certified science teacher and a Pennsylvania master naturalist. She has conducted countless foraging programs on plant nutrition, identification, safety, look-alike plants, sustainable harvesting and more. Her advanced training in nutrition provides a unique approach to appreciating wild edible plants.

JANUARY 26



Large yellow lady slipper (*Cypripedium parviflorum var pubescens*)

NATIVE ORCHID ECOLOGY AND CONSERVATION

As the second largest plant family, orchids are as beautiful as they are diverse. Pennsylvania is home to approximately 55 species of orchids, several of which can be found here at BHWP. Join Dennis Whigham, PhD, senior botanist at the Smithsonian Environmental Research Center, as we delve into the fascinating natural history and ecology of one of the most beloved plant groups.

Dennis Whigham is the founding director of the North American Orchid Conservation Center (NAOCC). In recent years, his studies of interactions between orchids and fungi have resulted in new and exciting directions—including research involving the rarest terrestrial orchid in eastern North America. The NAOCC is an initiative of the Smithsonian Institute and the United States Botanical Garden.

FEBRUARY 2

STRATEGIES FOR FOREST RESTORATION: ASSESSING IMPACTS OF DEER AND INVASIVE PLANT SPECIES

Jay F. Kelly, PhD, associate professor of biology and environmental science at Raritan Valley Community College, will present the results of his research on the impacts of overabundant deer and invasive plant species on forests in northern central New Jersey and the effectiveness of different tools for forest restoration. Since 2014, he and his students have studied over 250 forests in northern NJ, documenting how forest understories have changed since the mid-20th century, when deer and invasive plant populations were much lower. They also have studied the effectiveness of different forest restoration strategies—including deer exclosures, hunting programs, prescribed burning and native plantings.

Jay F. Kelly holds a BA in biology and a PhD in ecology & evolution, both from Rutgers University. His research interests are the biology and conservation of rare plant and animal species, coastal and forest ecology, and the design and implementation of ecological land management practices that balance the needs of humans with other species in the landscape. He received a Certificate of Special Congressional Recognition for his research and service in 2010.

FEBRUARY 9



Luna moths (*Actias luna*)
Photo by David Moskowitz

STRANGERS IN THE NIGHT: THE ESSENTIAL ROLE MOTHS PLAY IN A HEALTHY ECOSYSTEM

Moth expert Elena Tartaglia, PhD, associate professor at Bergen Community College, will highlight the essential roles that moths play in ecosystems as pollinators, environmental indicators and decomposers. Her talk details lepidopteran life cycles, as well as

various ways to attract and observe these organisms in your own garden. Learn about conservation threats to moths and other nocturnal biodiversity, and how to contribute data to National Moth Week, a citizen project focused on documenting global moth diversity and distributions.

Elena Tartaglia, a former BHWP intern, earned her PhD in ecology from Rutgers University. She is an expert on moths of the family Sphingidae and has studied various aspects of their ecology and behavior in urban ecosystems. She is a co-founder of National Moth Week, a global-scale citizen science project focused on nocturnal insect biodiversity. She has worked in public outreach and environmental education since 2005.

FEBRUARY 16



NEW JERSEY AMERICAN KESTREL NEST BOX PROJECT: PAST LESSONS, FUTURE MANAGEMENT

Bill Pitts will discuss the evolution of New Jersey's American Kestrel Nest Box Project, from its preliminary findings in 2004 to nest box installations in 2006 and its current initiatives. Through the years, it has expanded by growing public and private partnerships and spawned various research projects. There were many lessons learned along the way that Pitts will share with us, not the least of which was the listing of American kestrel as an endangered species in 2012.

Bill Pitts has been a senior zoologist with the New Jersey Division of Fish and Wildlife's Endangered and Nongame Species Program since 2005, and has worked with the American Kestrel Nest Box Project since 2012.

FEBRUARY 23



Photo by Albert D. Horner ©

NEW JERSEY PINE BARRENS PLANT COMMUNITIES: NOT BARREN AT ALL!

G. Russell Juelg, a land steward and educator for New Jersey Conservation Foundation, will explore the surprising diversity of plant communities in this treasured region of New Jersey—including historical and current attempts to categorize the various communities. He will also look at some notable rare plants, including true endemics to the region. He will discuss how the distinctive ecological conditions in the Pine Barrens, as well as hydrology and fire, created and maintain these communities.

G. Russell Juelg's botany education began with organizing and leading a growing number of public educational and recreational programs in New Jersey's Pine Barrens. A graduate of Texas Christian University, his former positions have included working for 11 years with the Pinelands Preservation Alliance and three years as the managing director of the Woodford Cedar Run Wildlife Refuge in Medford, NJ. He currently is working on a publication featuring the vascular plants of South Jersey.



Unless noted, advance registration is required for all programs.
REGISTER ONLINE AT BHWP.ORG/CALENDAR

Program Highlights: January-March 2020

The Preserve offers learning opportunities for all ages to enjoy. See the complete listing of programs and register online at bhwp.org/calendar.

QIGONG FOR HEALTH, HEALING AND HAPPINESS

Six Wednesdays, January 8, 15, 22, 29, February 5 and 12, 10 - 11 am.

Members: \$72, non-members \$90 for series of six classes.

Qigong is an ancient Chinese health care practice that is sometimes called Chinese yoga. It is both a gentle exercise and a moving meditation and involves moving energy in and around the body to facilitate health and healing. Come practice Qigong in the loveliness of the preserve in winter, overlooking the bird feeders, birds and slumbering trees.

Sandy Unger, MA, is certified as a Qigong and Tai Chi Easy leader through IIQTC (Institute of Integral Qigong and Tai Chi).

LANDSCAPE DESIGN: A PROCESS FOR THE HOMEOWNER

Five Saturdays: March 7 - April 4, 2 pm - 4 pm

Members: \$110, non-members \$125

Back by popular demand! You may know what a landscape is, but do you know what "design" is? In this expanded five-part series, landscape architect Don Borden—a former professor at Temple and Delaware Valley universities—will share his experience to help you understand the ins and outs of the design process.

You'll learn about the creative part of the process—from how to use texture, color and constructed aspects—to how to choose the best solutions for your landscape. The final class will help you put it all together. Those attending should select a project area they would like assistance with and bring photographs and a sketch or plan of the area to the first class. Seminar participants should also bring soft pencils, markers, colored pencils and yellow tracing paper (any art store) to each class.

NATIONAL ASSOCIATION FOR INTERPRETATION (NAI) CERTIFIED INTERPRETIVE GUIDE COURSE

Monday - Thursday, March 16 - 19, 9 am - 4 pm

Interested in honing your interpretive skills? BHWP is partnering with the NAI to offer a 32-hour professional certification course that is perfect for naturalists, docents or anyone working at nature centers, museums and schools.

For more information and to register, visit www.interpnet.com.

KNOWING NATIVE PLANTS

Members \$15, Non-members \$20 (for each program)

Pre-registration required. Presentation/discussion will be followed by an outdoor tour, except for the Plant Identification program.

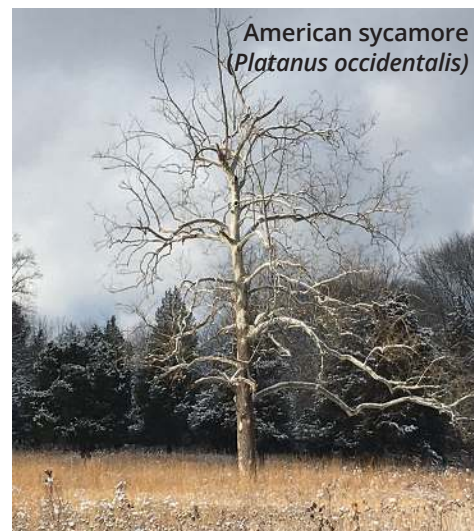
CEUs are also available.

PLANT IDENTIFICATION: SATURDAY, JANUARY 18, 1 - 3 PM

This indoor program will introduce you to the basics of identifying conifers and flowering plants using dichotomous keys. Ed Lignowski, PhD, former botany/plant physiology college professor, will teach you the vegetative and reproductive morphological features and terminology needed to use a typical plant identification key.



Swamp rose mallow
(*Hibiscus moscheutos*)
Photo by Mary Anne Borge



American sycamore
(*Platanus occidentalis*)

TREES IN WINTER: SATURDAY, FEBRUARY 22, 1 - 4 PM

Although this time of year the trees are dormant, they exhibit many interesting botanical features. Ed Lignowski will explain how to identify native deciduous trees and shrubs using buds, twigs, fruit, bark and shape as your only clues. Discover what these trees are doing to prepare for spring and how flowing sap is used to make maple syrup.

SIGNS OF SPRING: SATURDAY, MARCH 28, 1 - 4 PM

Meet the early flowering plants—including snow trillium, skunk cabbage and hepatica—and learn how they have adapted to this potentially harsh time of year. We will attempt to identify spring-blooming species from shoots just beginning to poke through the soil.



Hepatica spp.



Unless noted, advance registration is required for all programs.

REGISTER ONLINE AT BHWP.ORG/CALENDAR

For a complete list of our programs, please see Page 11.



JANUARY

WED 1	New Year's Day: Visitor Center Closed	
SUN 5	Winter Lecture: Healing Power of Nature - Mike Weilbacher	2 - 3 pm
WED 8	Qigong for Health, Healing and Happiness Series (#1 of 6)	10 - 11 am
SAT 11	For the Birds: Right seed, right feeder	10 - 11 am
SUN 12	Winter Lecture: Film and Discussion: How Fungus Made Our World - Jim Bray	2 - 3 pm
WED 15	Qigong for Health, Healing and Happiness Series (#2)	10 - 11 am
SAT 18	Knowing Native Plants: Plant Identification - Ed Lignowski, PhD	1 - 3 pm
SUN 19	Winter Lecture: Wild Edible Plants - Debra Naha-Koretzky	2 - 3 pm
WED 22	Qigong for Health, Healing and Happiness Series (#3)	10 - 11 am
SUN 26	Winter Lecture: Native Orchid Ecology and Conservation - Dennis Whigham, PhD	2 - 3 pm
WED 29	Qigong for Health, Healing and Happiness Series (#4)	10 - 11 am

FEBRUARY

SAT 1	Growing Native Plants from Seeds - Jason Ksepka	10 am - noon
SUN 2	Winter Lecture: Strategies for Forest Restoration: Assessing the impacts of deer and invasive plant species - Jay Kelly, PhD	2 - 3 pm
WED 5	Qigong for Health, Healing and Happiness Series (#5)	10 - 11 am
SUN 9	Woodland Winter Walk	10 - 11:30 am
SUN 9	Winter Lecture: Strangers of the Night: The essential role moths play in a healthy ecosystem - Elena Tartaglia, PhD	2 - 3 pm
WED 12	Qigong for Health, Healing and Happiness Series (#6)	10 - 11 am
SAT 15	Great Backyard Bird Count	10 - 11 am
SUN 16	Winter Lecture: New Jersey American Kestrel Nest Box Project: Past lessons, future management - Bill Pitts	2 - 3 pm
SAT 22	Knowing Native Plants: Trees in Winter - Ed Lignowski, PhD	1 - 4 pm
SUN 23	Winter Lecture: New Jersey Pine Barrens Plant Communities: Not barren at all! - G. Russell Juelg	2 - 3 pm

MARCH

SUN 1	Behind-the-Scenes Nursery Tour	12 - 1 pm
SAT 7	Landscape Design - A Process for the Homeowner Series (#1 of 5)	2 - 4 pm
THU 12	Land Ethics Symposium	9 am - 4 pm
SAT 14	Bagels and Birds for Beginners	8:30 - 10:30 am
SAT 14	Landscape Design - A Process for the Homeowner Series (#2)	2 - 4pm
MON 16 -		
THU 19	Certified Interpretative Guide Training	9 am - 5 pm
SAT 21	Landscape Design - A Process for the Homeowner Series (#3)	2 - 4 pm
SAT 28	Knowing Native Plants: Signs of Spring - Ed Lignowski, PhD	9:30 am - 12:30 pm
SAT 28	Landscape Design - A Process for the Homeowner Series (#4)	2 - 4 pm

APRIL

1 - 30	Guided Nature Walk Daily	2 - 3 pm
SAT 4	Landscape Design - A Process for the Homeowner Series (#5)	2 - 4 pm
SUN 5	Behind-the-Scenes Nursery Tour	12 - 1 pm
SAT 18	Native Plant Nursery 2020 Opening	
SAT 18	Bird Walk	7 - 9 am
SAT 18	Knowing Native Plants: Spring Ephemerals - Mary Anne Borge	9:30 am - 12:30 pm
SAT 18	Animals from Eggs	3 - 4:30 pm
SAT 25	Bird Walk	7 - 9 am
SAT 25	17th Annual Spring Wildflower Gala	5 - 10 pm

MAY

1 - 31	Guided Nature Walk Daily	2 - 3 pm
FRI 1	Nature at Night: Focus on Frogs	7:30 - 9 pm
SAT 2	Bird Walk	7 - 9 am
SAT 2	Knowing Native Plants: Late Spring Lovelies - Mary Anne Borge	9:30 am - 12:30 pm
SUN 3	Behind-the-Scenes Nursery Tour	12 - 1 pm
SAT 9	Bird Walk	7 - 9 am
SAT 9	Birding by Kayak	9 - 11 am
SAT 9	Medicinal Plants of the Northeast	1 - 2:30 pm
SAT 16	Bird Walk	7 - 9 am
SAT 16	Knowing Native Plants: Focus on Ferns - Ed Lignowski	1 - 4 pm
SUN 17	Painting in the Light of Spring Series (#1 of 6)	1:30 - 4:30 pm
SAT 23	Bird Walk	7 - 9 am
SUN 24	Painting in the Light of Spring Series (#2)	1:30 - 4:30 pm
SAT 30	Bird Walk	7 - 9 am
SAT 30	Knowing Native Plants: Flowering Shrubs - Mary Anne Borge	9:30 am - 12:30 pm
SUN 31	Painting in the Light of Spring Series (#3)	1:30 - 4:30 pm

JUNE

TUE - SUN	Guided Nature Walk	2 - 3 pm
SAT 6	Campfire Magic	6:30 - 7:30 pm
SUN 7	Behind-the-Scenes Nursery Tour	12 - 1 pm
SUN 7	Painting in the Light of Spring Series (#4)	1:30 - 4:30 pm
SUN 14	Painting in the Light of Spring Series (#5)	1:30 - 4:30 pm
THU 18	Children's Summer Reading Program	10 - 11:15 am
SAT 20	Invasive Species Identification and Management - Mary Anne Borge	9:30 am - 12:30 pm
SUN 21	Painting in the Light of Spring Series (#6)	1:30 - 4:30 pm
THU 25	Children's Summer Reading Program	10 - 11:15 am
SAT 27	Nature at Night: Focus on fireflies	7:30 - 9 pm
SUN 28	Growing Native Plants from Cuttings	10 - 11 am



**Bowman's Hill
Wildflower
Preserve**



Bowman's Hill
**Wildflower
Preserve**
PO BOX 685
NEW HOPE, PA 18938



*Check your mailing label for your membership expiration date.
It may be time to renew!*



TWINLEAF NEWSLETTER

WINTER 2019 | VOLUME 26, ISSUE 4

20th Land Ethics Symposium Thursday, March 12, 9 am – 4 pm

DELAWARE VALLEY UNIVERSITY

Join the Preserve for a not-to-miss symposium geared towards landscape architects, designers, contractors, land planners, municipal officials and homeowners. The symposium's focus: how to create ecologically sound and economically viable landscapes through the use of native plants and sustainable practices.

Presenters include:

- Monica Chasten, a project manager for the Philadelphia District of U.S. Army Corps of Engineers, on designing with nature in ecological restoration projects.
- Steve Black, organic tree nursery owner and operator, on the benefits of organically grown trees.
- Landscape architect Ching-Fang Chen, of the Maryland-National Capital Park and Planning Commission, on new aesthetics for public park design.
- Philadelphia architect Jules Dingle on designing the new Audubon Discovery Center in Philadelphia.
- Landscape architect Jennifer Pennington, a former BHWP staff member who will moderate a panel discussion on encouraging clients to pursue ethical landscape designs.

Continuing education credits are available.

For the latest information, and to register online beginning at year's end, go to bhwp.org/LES.

*Bluebells
(Mertensia virginica)*



EXPERIENCE WHAT'S NATURAL | LEARN WHAT'S NATIVE

Bowman's Hill Wildflower Preserve inspires the appreciation and use of native plants by serving as a sanctuary and an educational resource for conservation and stewardship.

Bowman's Hill Wildflower Preserve

PO Box 685
1635 River Road
New Hope, PA 18938-0685

Phone: 215.862.2924
Website: bhwp.org
Email: bhwp@bhwp.org