The Prince William Wildflower Society
Membership Meeting, via Zoom
Thursday, March 3, 7:30 pm

Program: Ian Caton, Landscape Designer, Speaker, and Owner of Wood Thrush Native Plant Nursery in Floyd, VA

Register in Advance: https://us02web.zoom.us/meeting/register/tZwud-6tgDwtHNd69XL8CfnDMRALkMQQWxWJ
After registering, you will receive a confirmation email containing information about joining the meeting.

“Super Tough Wildflowers”

Ian Caton will discuss how to garden in a way that works with difficult soils, harsh climates and other pests. This lecture is designed as an introduction to wildflowers that have proven, through experience, to be particularly reliable and tough under the most adverse conditions: drought, flooding, extreme heat, hard-pan soils, deer, and invasive species.

Ian graduated from Delaware Valley College, and has a BS in Ornamental Horticulture and Environmental Design. He worked for Larry Weaner Landscape Associates, designing and installing native landscapes. He has been the owner/operator of Wood Thrush Native Plant Nursery (formerly Enchanters Garden) since March of 2013 when he took it over from the previous owner (Peter Heus) who had been operating the nursery since the early-mid ‘90s. He has an extensive knowledge of native plants, natural communities, and their incorporation into the human environment. This experience was gained primarily through his long running relationship with Bowman’s Hill Wildflower Preserve as well as long experience designing and installing native landscapes. He has also had the opportunity to work with local governments on the development of landscape plans for public spaces.


Wood Thrush Native Plants is a nursery specializing in native plants of the Appalachian region including West Virginia, Virginia, Pennsylvania, Tennessee and North Carolina. A focus of the nursery is the introduction of new and rare native plants which are little known or under-appreciated in the nursery trade.

https://woodthrushnatives.com/about
Spring is on its way. On Thursday, February 17, I spied the tiny dark purple leaves of a clump of Virginia Bluebells just emerging from the soil in my garden. These beautiful spring ephemerals are the official wildflower of Prince William County, the logo flower of PWWS, and beloved by many of us. After an absence of a couple of years because of the pandemic, the Annual Bluebell Festival at Merrimac Farm Wildlife Management Area is back. The Prince William Conservation Alliance is once again hosting it on Sunday, April 10. PWWS will participate in this outdoor environmental festival, and we hope that some of you will volunteer your services staffing our table.

We held our Annual Author Event on Zoom for the second year in a row on February 20 and had 160 participants. With Kelly Norris’s presentation, we marked our tenth event. Kelly presented a visually stunning show and shared some great advice. I even learned a new term: *ruderal*, meaning a plant that grows where the natural vegetational cover has been disturbed by humans. These plants are the first to appear after the land disturbance. Often these plants are invasives, but some native plants thrive under these conditions.

Though I have enjoyed coordinating and attending our author events, I believe that holding these events on Zoom defeats the purpose of engaging recent book authors. In starting this annual practice, I had wanted to showcase the latest native plant gardening books and engage the author in book signings and sales. That doesn’t work on Zoom. Perhaps next year will be different.

Our March meeting will feature Ian Caton, a native plant landscaper and horticulturist, who, along with his wife, Elizabeth, owns Wood Thrush Natives, a native plant nursery in Floyd, Virginia. I first met Ian several years ago when I attended the Cullowhee Native Plant Conference at Western Carolina University in North Carolina. I’ve since seen him take his plants on the road for native plant sales. He knows his stuff!

Data center developments continue to threaten both Prince William Forest (national) Park and Manassas National Battlefield Park. The development proposed for PWFP is essentially an infill development; it will be scheduled for a public hearing soon. Watch for notifications by email and on social media.

We are hoping to schedule a spring wildflower garden tour for the end of April, but we need to find some additional gardens. Could this be the year for your garden? Contact me at nvehrs1@yahoo.com if you are interested. These free self-guided tours serve as an educational event to showcase how native plants can be incorporated into lovely gardens. They also preview many of the native plants that are offered at our annual native plant sale on Saturday, May 7. So many people in the community look forward to these two events, but they cannot happen without your volunteer efforts.

See you on Zoom! ~ Nancy
Prince William Wildflower Society
Membership Meeting Minutes
Thursday, January 6, 2022, 7:30 p.m. On Zoom

Nancy Vehrs, president of PWWS, called the meeting to order at 7:41 p.m. The February 20, 2022 Author Event will feature Mr. Kelly Norris on Zoom from his home in Iowa. The title of the book he has written is New Naturalism: Designing and Planting a Resilient, Ecological Vibrant Home Garden.

In January it is customary to have PWWS members present slides of wildflower gardens and scenes of nature found locally or from their travels, as well as pictures of plants from their own gardens. Five members participated.

Janet Hansen Martinet was the first presenter with beautiful photos from Mill Mountain State Park-Roanoke; Natural Tunnel State Park-Duffield, Virginia; Bog Gardens at Benjamin Park-Greensboro, North Carolina and Nashville, Tennessee's Bicentennial Capitol Mall State Park.

Janis Stone showed scenes from Leopold's Preserve; Shenandoah National Park; Prince William Forest Park; West Virginia's Dolly Sods Wilderness; Bull Run Mountains Natural Area Preserve and pictures from a Piedmont Chapter hike led by Richard Stromberg.

Jeanne Endrikat visited the Badlands National Park in South Dakota; Great Smoky Mountains National Park on the border between Tennessee and North Carolina; Mount Rushmore National Memorial surrounded by the Black Hills of South Dakota; nearby Custer State Park; East Columbia River; Beacon Rock along the Columbia River in Washington state, Trillium Lake-south/southwest of Mount Hood in Oregon; Ecola State Park on the coast of Oregon; Paradise Visitor Center on Mount Rainier in Washington state; Yellowstone National Park in northwest corner of Wyoming, Grand Teton National Park, 10 miles south of Yellowstone National Park; Casper and Register Cliff, Wyoming; Scott’s Bluff, Nebraska; Chimney Rock State Park near Asheville, North Carolina.

Marion Lobstein, wintering in Florida with George, joined in and showed some lovely photos of nearby nature along the Myakka River and also scenes around their Rambler's Rest RV Park near Venice, on Florida's Gulf Coast.

Nancy Vehrs finished the annual ‘Slide Show’ with pictures from Thompson Wildlife Management Area; Reddish Knob of Shenandoah Mountain, Va.; Huntley Meadows in southeast Fairfax County; West Virginia’s Dolly Sods Wilderness, and Shenandoah National Park.

Thank you all for the beautiful pictures! It was such a treat to view pictures of spring, summer and fall wildflowers, flowing rivers, and wildlife among leafed-out native vegetation, while we stayed in our warm homes on Zoom!

Karen Waltman, Secretary

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SAVE the DATES

**Sunday, April 10,** 10 am - 4 pm, Free — Annual Bluebell Festival at Merrimac Farm, Nokesville, VA. Come see the bluebell stands along Cedar Run. Presented by Merrimac Farm Wildlife Management Area, 15020 Deepwood Lane, Nokesville, VA 20181.

**Thursday, April 14,** 10 - 12 noon — Join Marion Lobstein as she leads a spring wildflower walk on the Stone Bridge Trail at Manassas National Battlefield Park.

**Sunday, April 24,** Prince William Wildflower Society Native Plants Garden Tour — details to be announced.

**Thursday, May 5** — PWWS General meeting. Dr. Cindy Smith will be presenting a program on collectively building biodiversity.

**Saturday, May 7,** 10 am - 12 noon — Prince William Wildflower Society’s Annual Wildflower and Native Plant Sale. To be held at Bethel Lutheran Church, Manassas, Virginia.
Upcoming EVENTS

Please Note: For events not scheduled at the time this issue went to press, please continue to visit the PWWS web page: vnps.org/princewilliamwildflowersociety.

March

Looking forward to upcoming spring native PLANT SALES? Please use this link to view a list of area sales: https://vnps.org/events/categories/type-of-event/plant-sales/

Tuesday, March 1, opens online at 10 am,
Northern Virginia Soil and Water Conservation District

PWWS Membership Meeting via Zoom
Thursday, March 3, 7:30 PM
“Super Tough Wildflowers”
Program: Ian Caton, Landscape Designer, speaker, and owner of Wood Thrush Native Plant Nursery in Floyd, VA
Register in Advance: https://us02web.zoom.us/meeting/register/tZwud-6tqDwtHNd69Xi8CinDMRALkJMQWxWJ
After registering, you will receive a confirmation email containing information about joining the meeting.

Sunday, March 6 at 1 pm
A Walk at Conway Robinson State Forest. Spend an afternoon walking in the woods and relishing a special forest worth protecting. For more information and details, and to register, visit: https://www.facebook.com/events/682716255899436/


Sunday, March 27, 8 am
Last Sunday of Every Month Birding and Nature Walk
Merrimac Farm WMA, Stone House, 15014 Deepwood Lane, Nokesville 20191
We’ll look for birds as we travel through the uplands to the edge of the floodplain, covering a variety of habitats, including open fields and woodland edges. Everyone is welcome. Dress for the weather, bring binoculars and cameras. More info and RSVP (appreciated) to PWCA, 703.499.4954 or alliance@pwconserve.org.

April

Sunday, April 10, Merrimac Bluebell Festival, 10 am to 4 pm, free, Merrimac Farm WMA, Stone House, 15014 Deepwood Lane, Nokesville 20191.

Thursday, April 14, 10 -12 noon,
Join Marion Lobstein as she leads a spring wildflower walk on the Stone Bridge Trail at Manassas National Battlefield Park. Park in the lot off Lee Hwy/Rt. 28 at the Fairfax/Prince William County line. Contact Marion Lobstein at mlobstein@earthlink.net to register. Size of group is limited, and masks are encouraged.

Thursday, April 14, 7:30 pm on Zoom
Potowmack Chapter hosts Andrea Weeks who will present Virginia’s Shale Barren Flora and the Legacy of Lena Artz. See http://vnps.org/potowmack/events for registration connection closer to the date.

May

Saturday, May 7, 10 am - 12 noon. Annual Wildflower and Native Plant Sale. Bethel Lutheran Church, Manassas

Thursday, May 12, 7:30 pm - A Zoom Meeting
Matt Bright, Conserving Rare Plants Through Propagation
See http://vnps.org/potowmack/events for registration connection closer to the date.
Cut-leaf Toothwort

By Marion Lobstein, Botany Chair PWWS and Professor Emeritus Northern Virginia Community College

Cut-leaf Toothwort (Cardamine concatenata, formerly Dentaria laciniata) is one of the showiest members of the Mustard family (Brassicaceae) to be found in our deciduous woods from mid-March into May. This perennial species is a true spring ephemeral that disappears above ground by late May. The habitat of Cut-leaf Toothwort is rich, moist deciduous woods. Its range is from western Quebec and Vermont south to Florida and Alabama and east to Kansas. In Virginia, Cut-leaf Toothwort is found all over Virginia, except for a handful of southeastern counties. The updated genus name Cardamine is derived from the Greek word "kardaminē," an ancient name for watercress used by Dioscorides, the Greek physician of the 1st century A.D. The species epithet or name, concatenata, means to link together and refers to the chain-like, linked segments of the rhizomes. The former genus name Dentaria is derived from the Latin “dens,” meaning tooth, referring to the rhizomes, which have a toothed appearance, and laciniata, which means slashed or cut, referring to the irregular toothing of the leaves. Other common names for Cut-leaf Toothwort are Crinkleroot (referring to the appearance of the rhizome), Purple-flowered Toothwort (referring to the variation in flower color), and Pepper root (referring to the peppery taste of the rhizomes of this and other toothwort species). A less common species of toothwort, the Slender Toothwort Cardamine angustata, (formerly Dentaria heterophylla), can be found in northern Virginia. The species epithet angustata means slender, and heterophylla, having different leaves. The flowers of Slender Toothwort are very similar to those of Cut-leaf Toothwort, but there are only two (rarely three) opposite toothed leaves halfway up the stem as well as a basal toothed leaf. The habitat of this species is in drier woods.

The underground storage stems of both toothwort species are rhizomes, mentioned earlier, as well as some tubers that are more deeply buried. White-footed mice may feed on the tubers. The light-colored, pungent rhizome is five to seven inches long and often has a beaded appearance. Its fibrous roots of the rhizome are shallow. The height of Cut-leaf Toothwort plants is seven to fifteen inches tall. The three whorled leaves of Cut-leaf Toothwort develop roughly two-thirds up on the stem. These leaves are usually deeply divided into three to five segments whose margins may range from sharply toothed to almost entire. There may even be some purple tinge on the young leaves. The Slender Toothwort has solitary trifoliate basal leaves as well as 2-3 opposite or whorled leaves that are trifoliate with toothed margins. The larvae of the Virginia White Butterfly feed on the leaves of both species. As with other spring ephemerals, the leaves and aboveground stem of toothwort generally senesce or die back by late May. A few plants may have leaves that persist into summer.

The flowers of this species are borne in a loose terminal cluster of 12 or more on flowering stems or peduncles whose petals that are usually tinged with pinkish-lavender, six stamens (with two being shorter than the other four), and a pistil with an elongated style. The scentless flowers secrete nectar that attracts a variety of species of bees and syrphid flies as well as some butterfly species including the Spring Azures and Mourning Cloaks. If insect pollination fails, as a backup plan, self-pollination may occur in a few non-showy flowers. The three-quarter to one-and-one-half-inch-long fruit that develops after fertilization is an elongated, narrow fruit (characteristic of many species of the mustard family) called a silique. There are up to 20 or more small brown seeds within each fruit. The seeds are explosively dispersed as the fruit matures and splits open.

Medicinal uses of cut-leaved toothwort rhizomes were used to treat colds and throat problems. Crushed rhizomes were used as poultice to treat wounds. Based on the "Doctrine of Signatures" (the premise that if a plant part resembles a human body part it has the medicinal value to treat that body part), it was once thought the rhizome segments that resemble teeth could be used to treat toothache. The rhizomes and leaves of both Toothwort species are edible cooked or raw. American Indian tribes, early European settlers, and modern native plant food enthusiasts have used the peppery rhizome of toothwort in various food preparations. According to some people, it can be substituted for horseradish. However, as with other native plants, please leave toothwort plants you find for you and others to enjoy in years to come. Feast on delicate beauty of this plant with your eyes only!

![Image of Cut-leaf Toothwort](image1.jpg)

![Image of Slender Toothwort](image2.jpg)
Brassicaceae (Mustard Family)

Taxonomic Changes in the *Flora of Virginia* (2012), and the Flora of Virginia App (2020 Update)

By Marion Lobstein, Botany Chair, Prince William Wildflower Society and Professor Emeritus, Northern Virginia Community College

Brassicaceae or Cruciferae, the Mustard Family, is one of the largest dicot families worldwide with roughly 340 genera and 3780 species. In the *Flora of Virginia* (2012), there were 30 genera and 67 species treated. In the Flora of Virginia App (2020 update), there are 33 genera and 70 species. Brassicaceae is one of the easiest families to recognize, with four sepals, four petals, six stamens (four long and two short), and a pistil with a superior ovary. The shape of the flower is reminiscent of a cross, thus the traditional family name of Cruciferae. The modern family name of Brassicaceae is based on the genus *Brassica*, with the suffix –aceae added. This effort to standardize family names using a typical genus of that family and adding –aceae goes back to 1930 by a decision of the International Code of Botanical Nomenclature by the International Botanical Congress. In the Code, eight historical family names were designated to legitimize the historic names with the newer names, and Cruciferae and Brassicaceae was one of the eight families. The recognition and uses of members of this family go back to Greek and Roman times and perhaps even farther back in Europe. Some of the genera, such as *Cardamine*, were used by Dioscorides, the Greek physician of the first century A.D. Herbalists of the sixteenth and seventeenth centuries, such as Dodoen, Gerald, and Culpeper, recognized European species of *Cardamine* for medicinal use. Edible use of species and cultivars in this family—often called the Cabbage family—are legendary, going back to ancient times. John Clayton in his 1762 *Flora Virginica*, included at least 16 species with 11 herbarium specimens in the John Clayton Herbarium at the British Natural History Museum.

In the 2012 *Flora of Virginia* edition and in the 2020 update of the Flora of Virginia App, there are a number of taxonomic changes for Brassicaceae. The most obvious changes for spring wildflower enthusiasts are the scientific names of *Dentaria laciniata* (Cut-leaf toothwort) and *D. heterophylla* (Slender toothwort) changed to *Cardamine concatenata* and *Cardamine angustata* respectively. In 1800, H.E. Muhlenberg gave the scientific name of *Dentaria laciniata*, Cut-leaf Toothwort, to *Cardamine concatenata*. Cut-leaf Toothwort, *Cardamine concatenate*, and Slender Toothwort, *Cardamine diphylla*, were renamed *Dentaria concatenata* and *Dentaria diphylla*, respectively, by Andre Michaux, the French botanist and explorer of much of the eastern U.S. and southeastern Canada in the late 1700s through the early 1800s. After his death in 1802, the scientific names of these two Toothworts were published in 1803, giving credit for these scientific names to Michaux. In 1818, Thomas Nuttall renamed *Cardamine heterophylla*, Slender Toothwort, as *Dentaria heterophylla*. Linnaeus listed eight species of *Dentaria* in *Species Plantarum* (1753) but all of these were European species. Now all species of *Dentaria* are placed in the genus *Cardamine*. By the end of the 1800s, various botanists were suggesting *Dentaria* should be a subgenus of *Cardamine*. In 1870, William Wood changed the name of *Cardamine heterophylla* to *Dentaria heterophylla*. Linnaeus listed eight species of *Dentaria* in *Species Plantarum* (1753) but all of these were European species. Now all species of *Dentaria* are placed in the genus *Cardamine*. By the end of the 1800s, various botanists were suggesting *Dentaria* should be a subgenus of *Cardamine*. In 1870, William Wood changed the name of *Dentaria heterophylla* to *Cardamine heterophylla*. By the 1930s, a number botanists moved some *Dentaria* species to *Cardamine*. In 1939 Otto Swartz renamed Cut-leaf Toothwort *Cardamine concatenata*. Since the 1990s, numerous DNA studies have indicated that former *Dentaria* species are indeed species of *Cardamine*.

The 2020 update of the Flora App makes the following additional taxonomic changes:

**There are two new genera:**

*Abdra brachycarpa*, Whitlow Grass, was *Draba brachycarpa*

*Noccaea perfoliata*, Perfoliated Pennywort, was *Microthlaspus perfoliatum*

**New species added:**

*Sinapis arvensis*, Charlock, was *Brassica kaber*; this was a waif in the *Flora of Virginia*

*Lepidium draba*, Hoary Cress, was *Cardamine draba*; this was a waif in the *Flora of Virginia*

*Cardamine longii*, Long’s Bittercress, was *Cardamine Pennsylvania* and is under study to verify it is a separate species

**Name changes:**

*Lepidium virginicum* var. *virginicum* was *Lepidium virginicum*

*Arabis pycnocarpa* var. *adressipilisis* now *Arabis adpressipilisis*

In addition to the taxonomic changes to the Cut Leaf and Slender Toothworts, the *Flora of Virginia* (2012) listed other taxonomic changes in Brassicaceae. Below is a summary of these changes:

*Arabis*, once a fairly large genus in Virginia now has only two species: *A. patens*, spreading rock cress and another rare mountain species, *A. pycnocarpa* (hairy rock cress)

*Arabis lyrata* (Lyme-leaf rock cress) now *Arabidopsis lyrata*

*A. glabra* (Tower mustard) now *Turritis glabra*

Most *Arabis* species moved to *Boechera*:

*A. laevigata* var. *burkii* (Burk’s smooth rock cress, a rare variety documented in the mountains of Virginia) now *B. burkii*

*A. caudanesis* (Canada rock cress) now *B. caudanesis*

*A. shortii* (Shorts’ rock cress) now *B. dentata*

*A. laevigata* (Smooth rock cress) now *B. laevigata*

*A. serotina* (Shale barren rock cress) now *B. serotina*

*Rorippa nasturtium-aquaticum* (Watercress) now *Nasturtium officinale*

*Thlaspi perfoliatum* (Perfoliate pennycress) now *Microlapsia perfoliatum*

*Silene virginica* (Virginia winged rock cress) now *Planodes virginicum*, but was named *A. virginicum* by Linnaeus

*Allaria officinalis* (Garlic mustard) is now *Allaria petiolata* but once was named *Arabis petiolata*, originally *Erysimum alliaria* (Linnaeus)
Notes
on PWWS Recent Author Event with Kelly D. Norris

In order to cover a large body of material, Kelly D. Norris spoke quickly, making thorough note-taking a challenge; but Harriet Carter has graciously shared the following notes with us:

Kelly showed charming and impressive natural landscapes from his property “Three Oaks” in Iowa.

Major Points:

• Strive for spatially complex, biodiverse gardens
• Understand how plants “function” together (plant buddy systems – my understanding)
• …in the end, it is all about place
• He quoted Wendell Berry: “A path is little more than a habit that comes with knowledge of place.”
• Reference points on web: www.bonap.org (Climate, soils and geography) influence plant communities
• Interesting point: Increased fertility reduces plant diversity. In other words, if plants are fighting for space you’ll get more diversity.
• Plant architecture correlates with adaption.
• Plant densely — if 10 are good, 100 are better.
• The future vegetation in cities’ urban environments is ruderal. (Growth on waste ground or refuse) These spaces should not be ignored but can be filled with appropriate native plants. (He showed impressive examples.)
• City Garden ™ is the future of public planting.

Practical steps:

A plant community consists of a series of layers. (Investing in the “long haul”; it will take time — sleep, creep, leap analysis)

• First layer: Green mulch (i.e. Eastern wood aster – he had more examples)
• Second layer: Structural plants, woody or not, to flourish throughout the seasons (My take: plant for diversity with structural plants that grow and flourish in different seasons for interest) i.e. penstemon digitalis
• Third layer: Vignettes of plantings for interest, i.e. melanthium virginicum
• For shady areas: Subtle greens are more conducive to quiet reflection.
• When starting: Use smaller plants – they will establish more quickly with better results.
• Discussed plantings for hell strips in city streets if allowed by HOAs.
• For the new garden environments: Embrace change on all scale. It’s all about Management NOT Maintenance. Naturalized places require little weeding. (My take: Convince your neighbors that it is beautiful.)

Resources:

Kelly Norris is on Instagram and Facebook

“The goal is to stay in the game — keep playing”
Prince William Wildflower Society
A Chapter of the Virginia Native Plant Society
P.O. Box 83, Manassas, Virginia  20108-0083

Next Meeting: Thursday, March 3, 7 - 9 pm, via Zoom
“Super Tough Wildflowers” with Ian Caton

Thrush Artwork by the late John A. Ruthven

Annual PWWS Plant Sale

Our chapter plant sale is scheduled for the customary Saturday before Mother’s Day, May 7 this year. And, as usual, we’ll be on the grounds of Bethel Lutheran Church. As we get closer to the sale date, we will announce any Covid-19 guidelines that we will need to adhere to.

Attention PWWS gardeners: We will be counting on you to contribute plants as you have done in the past. I will be in touch with updates and reminders as we go forward.

Nancy Arrington, Plant Sale Chairman
narrington1@verizon.net

At right: Harriet Carter shared with us beautiful spring photos, taken in a previous year, of her Manassas urban garden, showing woodphlox (woodland plox divericata), ferns and May Apples (Podophyllum)