



Wild News

The Bi-monthly Newsletter of the Prince William Wildflower Society
A Chapter of the Virginia Native Plant Society

Number 2020-03

May - June 2020

July 2, 7:30 - 9:00 PWWS Meeting Adaptations due to Coronavirus

Julie Flanagan, Prince William County's Urban Forester, is scheduled as the speaker for our July meeting. Stay tuned for more details later as we explore the possibility of holding this meeting virtually.

President's Column

Bluebell Festival? Canceled! Garden Tour? Canceled!
May meeting with native bee expert Sam Droege?
Canceled! Battlefield Walk with Marion Lobstein?
Canceled! Plant Sale? Canceled! COVID-19 put an end
to **ALL** scheduled group activities for the spring.

But, Mother Nature gave us a glorious spring. Our nonexistent winter presented us with an early spring with many plants exhibiting their earliest bloom times ever. Then, progress stalled as we experienced a cooler than normal April and May. With everyone spending more time at home, we marked the time by observing the wonders of nature in our own back yards and neighborhoods. Despite the closure of parks — or just their parking lots — some of us ventured out for social distancing nature bathing. Virginia is now phasing in the reopening process and our future remains uncertain.

Though our 2020 wildflower garden tour did not take place, I thank Marie Davis and Dee Brown and Glen Macdonald for volunteering to share their gardens. Once it was apparent that we could not hold the tour, I hoped to create a virtual video tour. Unfortunately, my skill set is lacking in that department so all I could offer was a photo tour of Marie's garden on the PWWS Facebook page. Given how much time they have been spending in

their gardens this spring, several members have indicated interest in participating in the tour in future years.

Just recently several PWWS volunteers planted wildflower plugs at the I-95 rest area that I had overwintered in my garden. Last November the Virginia Department of Transportation purchased hundreds of plugs for us to use to fill in blank spots in the pollinator beds that we help maintain. Unfortunately, we could not muster enough volunteers at the time, so many of the plants had to wait until spring. Many thanks go to Karen Waltman, Sharon McCracken, Valerie Kenyon Gaffney, Sandy Jeter, Carol Thompson, and Janet Wheatcraft for their planting efforts while maintaining proper social distancing protocols. Because temperatures remained cool and rains came the next day, we are hopeful that these hardy native plants will acclimate well. Please keep in mind that we will need volunteers to help with weeding as the season progresses. It's a lovely site that attracts bees, butterflies, and birds.

Please stay healthy and safe as we try to return to a new "normal." I hope to see you this summer.

Nancy



Passing of Paul Davis

Our condolences to charter member Marie Davis on the passing of her husband Paul. He supported Marie in her gardening endeavors and was a regular at our plant sales as he delivered the hundreds of plants that she donated every year.

Prince William Wildflower Society
Membership Meeting
Thursday, 7:30 p.m., March 5, 2020
Bethel Lutheran Church, Manassas

President Nancy Vehrs welcomed all and introduced the speaker, ecologist Charles Smith.

The title of the talk was 'Herbivory: Why Is It Important That Plants Get Eaten?'

Charles provided a definition of herbivory: the act of eating plants or plant-like organisms. Plants developed on land and near water about 500 million years ago, and all five animal kingdoms consume plants. Plants provide nutrients to animals, but some plants developed strategies for defense (thorns, ability to thrive in harsh areas, etc.). Potential benefits of herbivory are that new growth of the devoured plants is stimulated, as well as a localized disturbance of a group of plants could promote diversity. It was an interesting look at a new (for me anyway) field of study. Thank you, Charles.

Nancy announced the April 11 Bluebell Festival and our Plant Sale on May 9. Nancy is looking for three gardens to

be on the Garden Tour also. A sign-up sheet was passed around for those who could volunteer at these events.

Valerie Keyon Gaffney announced the raffle for a *Flora of Virginia*. The drawing will be at the Bluebell Festival, April 11. One ticket will cost \$1; 6 tickets will be \$5.

[At the direction of Governor Northam, all events or gatherings of 10 or more in the state were canceled until June 10 because of the COVID-19 disease, caused by the coronavirus. PWWS's spring events mentioned above were therefore canceled.]

Doorprizes included a potted mountain mint plant and a gift certificate for Wild Birds Unlimited, in Gainesville.

In attendance: Tim Keily, Dee Brown, Glen Macdonald, Rose Breece, Dorthie Brandy, Howard Cook, Cathy Hindman, Nancy Arrington, Lois Montgomery, Jeanne Endrikat, Sally Semple, Valerie Kenyon Gaffney, Sandy Jeter, Deanna High, Jack High, Beverly Houston, Rita Romano, Jane Smith, Ingrid Davis, Linda Mallery, Tom Attanaro, Jim Gallagher, Judy Gallagher, Val Neitzey, Elaine Haug, Brian McDougal, Brigitte Hartke, Nancy Vehrs, Harry Glasgow, Karen Waltman, and speaker Charles Smith.

Karen Waltman, Secretary

While Socially Distancing . . .

Three Virginia Native Plant Society members planted some of VDOT's native plant plugs on May 19 at the I-95 North Car Rest Area, near Exit 156; Sharon McCracken, Nancy Vehrs, and Karen Waltman participated. (The photo of the wildlife way station is from previous year.)

On May 21 five members finished off the flats of plugs: Carol Thompson, Valerie Kenyon Gaffney, Sandy Jeter, Janet Wheatcraft, and Karen Waltman. Thank you, ladies!



Prince William Wildflower Society Newsletter

Wild News is the bi-monthly newsletter of the Prince William Wildflower Society, P.O. Box 83, Manassas, Virginia 20108. View *Wild News* in color at: vnps.org/princewilliamwildflowersociety/

Nancy Vehrs, President; Brigitte Hartke, Editor. Please submit article submissions to BrigitteHartke@gmail.com. Original material in *Wild News* may be reprinted if credit is given to PWWS, to *Wild News* and to the author of the material, if named.

Next submission deadline: June 10

MAYAPPLE (*Podophyllum peltatum*)

(Reprinted with minor changes from Wild News May-June 2012 issue)

Marion Blois Lobstein, Botany Chair, Prince William Wildflower Society



Mayapple (*Podophyllum peltatum*) is one of the most easily recognizable spring wildflowers by its distinctive foliage. By early to mid-April the unopened, peltate leaves of Mayapple begin to poke through the forest litter resembling a fat green umbrella ready to unfurl. The singleleafed stems will not produce a

flower that season. The forked stems bearing two leaves will have a tight flower bud nestled at the base of the two petioles. By the end of April and often the first week of May, the lovely white, waxy flowers begin to open. (photo: B. Hartke)

Found in rich woods, thickets, and even roadsides from Quebec and Ontario south to Florida and Texas, this species is now placed in the Berberidaceae or barberry family although it once was included in the Ranunculaceae or buttercup family. Linnaeus assigned the binomium (genus and species) of *Podophyllum* from "podos" meaning foot, "phyllum" meaning leaf, and "peltatum" meaning shield. Other common names are mandrake, wild lemon, and raccoon berry.

The flowers of Mayapple are up to two inches in diameter with six sepals that are shed early in blooming, 6-9 white waxy petals, numerous yellow stamens (usually twice the number of petals) with the anthers opening down the side, and a pistil with a large stigma. The flowers lack nectar, but offer the native bees and bumblebees that visit them a rich pollen reward. There is a fragrance to the flower that is a bit pungent or musky. Frequency of successful pollination is often not high in Mayapple flowers, even though there is extended anthesis (shedding of pollen) as well as receptiveness of the stigma if pollination has not been accomplished. Queen bumblebees are especially attracted to Mayapple flowers to

collect pollen for rearing workers, and thus may be primary pollinators.

Fruit set rates are often low for individual colonies of plants and mature fruits are even rarer. Mature fruits resemble a small lemon-colored, egg-shaped fruit that is technically a berry one-and-a-half to two inches long. The fruit matures by August, and if the seeds remain in the same area as parent colony, the germination rate is low. If the seed does germinate, the seedling may be shaded out by other individuals the next spring. The Eastern box turtle is thought to be the primary seed disperser. There is some evidence that the white-footed mouse, the gray squirrel, and the grackle may also serve as seed dispersers along with opossum, raccoon, fox, and even black bear.



To humans, the immature fruit as well as the other plant parts are poisonous, although there are modern medicinal uses of the rhizome.

Mayapple may put up to 40 percent of its energy into its underground rhizome compared to only 8 percent of its energy into sexual reproduction. The rhizome, a horizontal underground stem, is the main method of producing new plants. A colony of Mayapple plants may all have developed from a single seed. A seed once it germinates will not form

a rhizome until it is over five years old and may not produce blooms until a plant is 12 years old. Colonies grow at a rate of 4 to 6 inches per year, and very large colonies may be more than 100 years old. One colony may contain up to 1,000 shoots. If an individual plant has produced mature fruit during a given season, it will have decreased rhizome growth and a decreased chance of being forked the next year and bearing flowers. If a plant does not produce fruit, or if it is a single leafed plant, the leaves usually senesce (die back) by early summer. Leaves persist in plants that have maturing fruits.

As mentioned above, immature fruits as well as the vegetative structures of Mayapple are poisonous. As with many drugs, there is a fine line between poison and effective medicinal use. American Indians ate the ripe fruits and used a number of medicinal Mayapple preparations. The list of uses by American Indian include treatments for rheumatism, as a laxative as well as treatment for diarrhea, ulcers, sores, liver and bile problems, hemorrhoids, headaches, diuretic, whooping cough, cholera, pneumonia, problems of male and female reproductive tracts, as a purgative, and for anthelmintic (worming) purposes. Reportedly, individuals of some Indian tribes even used rhizomes of this plant to commit suicide.

In the 1800s and early 1900s, Mayapple extract was used as an active ingredient in Carter's Little Liver Pills; today, it is used as an extract called "Podophyllin" to remove genital warts. Drugs derived from the rhizome are being used in Europe, and are being tested in this country to treat forms of cancer such as cancer of the testes, two forms of lung cancer, Kaposi sarcoma, and some forms of leukemia. It also has been used to treat syphilis. There is some evidence that American Indians used this plant also to treat forms of cancer such as ovarian and skin cancer. Modern research shows evidence of Mayapple extracts that inhibit cell division, thus blocking new growth of tumors.

Mayapple's ripe fruits are edible, and there are recipes for jellies and pies as well as the extraction of its juice to add to lemonade. This spring, savor the beauty of Mayapple. Be very cautious if you wish to sample the fruit, but do it soon, before the forest animals enjoy it instead!



An overview of the history of the naming and classification of Mayapple

The story of the common and scientific names and classification of Mayapple has been one of many changes. Many American Indian tribes used names that described the physical appearance or medicinal use of Mayapple. The Cherokee name for Mayapple was OO-NEE-SQUA-TOO-KEY ("it wears a hat"), and the Osage Indian name was CHE-SANE-PE-SHA ("it pains the bowels"). In 1615 the French explorer, Samuel de Champlain was the first European to record observing Mayapple cultivated in Canada by the Huron Indians. Some common French names include "ipécacuanha de la Caroline," referring to the purgative properties of the plant. In England, the use of Mayapple as a purgative led to the common name of American mandrake (the European mandrake, a different plant, was a commonly used purgative), and it is thought the herbalist Nicholas Culpeper included American mandrake in his famous herbal of the late 1600s. In 1700, the French botanist Joseph Pitton de Tournefort gave Mayapple the Latin name of *Anapodophyllum canadense morini* with the genus meaning "duck's foot leaf." In 1789, A.L. de Jussieu proposed the Barberry family (Berberidaceae), but placed Mayapple in the Buttercup family (Ranunculaceae). Mark Catesby used the name *Anapodophyllum canadense* in 1730 when he sent Mayapple specimens to Linnaeus. By 1753, Linnaeus had shortened the genus name from *Anapodophyllum* to *Podophyllum* and changed the species name (epithet) to *peltatum* but placed Mayapple in family that is now part of the Poppy family (Papaveraceae). In the 1762 *Flora Virginica* (second edition), Mayapple appears as *Podophyllum foliis pellatis lobatis*. By the 1800s the American botanist Asa Gray in his famous Gray's Manual of Botany had placed Mayapple in its present barberry family (Berberidaceae). Recent DNA analysis has shown Mayapple to be properly placed in Berberidaceae. It has been a long and changing road to the present classification of this special plant!

Spring Wildflowers of the Mid-Atlantic Region

About 20 years ago, Marion Lobstein and two of her former students, John DeMary and Suzanne Lohr, developed and produced a beautiful video about spring wildflowers in our area. What began as a class project blossomed into a feature-length video titled ***Spring Wildflowers of the Mid-Atlantic Region***, which received a 1998 **Telly Award** for excellence in non-network productions. The 48-minute video was later converted to DVD with sale proceeds donated to the Foundation of the ***Flora of Virginia Project***.

To view this video visit: <https://vnps.org/spring-wildflowers-of-the-mid-atlantic-video/>. The link to the video is in the middle of this webpage.

Spring Wildflowers includes information on nearly 100 species of spring wildflowers found in our area. The 35mm slides used to develop the wildflower stills provide details for identification as well as enjoyment of the beauty of these wonderful plants. You will also find wildflower life cycle information including ecological influences on vegetative and flower production, pollination, seed and fruit dispersal, underground storage structures, and historical, medicinal and edible uses.

For additional information on this special on spring wildflowers, access Marion Lobstein's articles on native spring wildflowers and on taxonomic changes reflected in the *Flora of Virginia*, visit: <http://vnps.org/princewilliamwildflowersociety/wildnews/>. These articles are in the archives of published issues of *Wild News*, the newsletter of the Prince William Wildflower Society, a chapter of the Virginia Native Plant Society. Typically these articles are towards the end of the *Wild News* newsletters. Special thanks to Deanna High and Brigitte Hartke for the editing of these articles.

The following is a list of the articles published to date:

Wild News (May-June-2012): May Apple and Barberry Family (Berberidaceae)

Wild News (March-April 2013): Spring Beauty and move to new family Montiaceae

Wild News (May-June 2013): Trilliums and traditional Lily Family (Liliaceae) breakup

Wild News (January-February 2014): Skunk Cabbage and Arum Family (Araceae) taxonomy

Wild News (March-April 2014): Virginia Bluebells and Borage Family (Boraginaceae) taxonomy

Wild News (May-June 2014): Wild Ginger

Wild News (July-August 2014): Birthwort Family (Aristolochiaceae) and Basal Angiosperms taxonomy

Wild News (January-February 2015): Hepatica and Buttercup Family (Ranunculaceae) taxonomy

Wild News (March-April 2015): Toothwort and Mustard Family (Brassicaceae) taxonomy

Wild News (May-June 2015): Alumroot and Saxifrage Family (Saxifragaceae) taxonomy

Wild News (March-April 2016): Harbinger of Spring and Carrot Family (Apiaceae) taxonomy

Wild News (May-June 2016): Wild Geranium and Geranium Family (Geraniaceae) taxonomy

Wild News (March-April 2017): Dwarf Crested Iris

Wild News (May-June 2017): Dwarf Crested Iris and Iris Family (Iridaceae) taxonomy

Wild News (September-October 2017): Pawpaw

Wild News (November-December 2017): Annonaceae and *Asimina* (Pawpaw) taxonomy

Wild News (January-February 2018): SPRING WILDFLOWER LIFE CYCLE INFORMATION
SPRING WILDFLOWERS: ECOLOGICAL FACTORS

Wild News (March-April 2018): BLOODROOT: Bloodroot (*Sanguinaria canadensis*)

Wild News (May-June 2018): SPRING WILDFLOWER LIFE CYCLE INFORMATION - Underground Storage Structures, Pollination, and Myrmecochory-Seed DISPERSAL BY ANTS

Wild News (July-August 2018): Papaveraceae (Poppy Family) and *Sanguinaria canadensis* (Bloodroot) Taxonomy in the Flora of Virginia

Wild News (March-April 2019): Redbud (*Cercis canadensis*)

Wild News (May-June 2019): Jack-in-the-Pulpit (*Arisaema triphyllum*)

Wild News (January-February 2020): Skunk Cabbage

Wild News (March-April 2020): Virginia Bluebells

A personal note from Marion Lobstein about a recently published book

André Michaux in North America: Journals and Letters, 1785-1797

I grew up as Marion Louise Coble in Stanley, NC from 1955 through 1968. As a child I explored the woods about my home on N. Peterson St. An intersecting street was E. Poplar St. where I found a woody plant with very large leaves. I even pressed some of the smaller leaves of this tree for my Girl Scout "Tree" merit badge. All of us children in the neighborhood called this plant "Elephant Ears."

When I majored in Biology at Western Carolina University (WCU) from 1964-1968 I became increasingly interested in Botany, especially plant identification. In 1966, I participated in a Regional Flora class. I was inspired by Dr. Jim Horton, who taught this class, to continue my interest in plant identification using the *Guide to the Vascular Flora of the Carolinas*. After graduating from WCU in 1968, I lived in Chapel Hill, NC where I worked as a research technician at the National Institute of Environmental Health Sciences. During this time, I also earned my Masters of Art in Teaching, with a concentration in Botany, from the University of North Carolina-Chapel Hill. At UNC, I had the opportunity to participate in Dr. Ritchie Bell's graduate Plant Taxonomy course using the *Manual of the Vascular Flora of the Carolinas*.

In 1974, I moved to Northern Virginia, and began teaching at Northern Virginia Community College (NVCC) at the Loudoun Campus, where I set up, taught, and wrote labs. I also started a small herbarium collection for the campus. I began to ask if there were a flora for the state of Virginia, as I continued to identify plants using the Carolina flora. In 1976, I began teaching as a faculty member at the Manassas Campus of NVCC, where I taught General Biology, Plant Identification, Introductory Botany, Wetland Plant Identification, Wetland Plant Ecology, Human Anatomy and Physiology, and Microbiology.

In 1977, I became active in the Virginia Academy of Science (VAS). While participating with the Botany Section of VAS, I learned about VAS's effort to develop a modern flora for Virginia. The Academy supported the development of the *Atlas of the Virginia Flora* which documented the distribution of vascular plant species in the counties of Virginia. (An atlas is often the first step in developing a guide to that type of flora, before a full flora is developed.) In 1977, Part I of the Atlas that covered Monocots was published. In 1981, Part II covering Dicots was published and *Magnolia macrophylla* (Elephant Ears) was included as documented in Lee County, the most southwestern county of Virginia. Unfortunately, following these two Atlas parts,

efforts to develop a flora manual was stalled. In 1999, I learned there was, again, another opportunity to restart the efforts to develop a flora manual. I procured a grant from the Academy to explore the steps to seek this goal again.

Also that year, I had met with Dr. Alan Weakley, now curator of the UNC Herbarium, and he expressed support for a new flora manual for Virginia. Alan eventually became the first author of the *Flora of Virginia*. In 2000, I met with Chris Ludwig, a Biologist for the Virginia Natural Heritage Program, and Chris also agreed to be part of these efforts. In 2001, the Foundation of the Flora of Virginia Project (FFVP) was established and became a 501(c) 3 non-profit organization with a Board of Directors. Chris Ludwig became the Director of FFVP and the second author of the *Flora*; Johnny Townsend eventually became the third author. I became an active member of the FFVP board and served as vice-president in the second and now current board. I retired from NVCC in 2011, giving me even more time to help with the Flora Project. In 2012, the first edition of the *Flora of Virginia* Manual was published. *Magnolia macrophylla* (Bigleaf Magnolia), my childhood "Elephant Ears", was included in the *Flora*.

In 2017, a Flora of Virginia Mobile App for iOS and Android cell phones and tablets was made available. This digital App has had a number of updates and will provide a tool to add new species, update taxonomy, and other information, besides being a great tool for identification of plant species.

In the early 2000s, I received a copy of the book *Journeys through Paradise: Pioneering Naturalist in the Southeast* by Gil Fishman. As I read this fascinating book that traces the journeys of early naturalists through the Southeast, I learned André Michaux had discovered *Magnolia macrophylla* near Stanley, NC. A man named Charlie Williams was mentioned in the same chapter; Charlie was the person who led Gail Fishman to the location of Michaux's original discovery. Charlie Williams was a Charlotte, NC librarian who had become interested in Michaux's discovery and documentation of *Magnolia macrophylla*.

In 2005, I had the great pleasure of meeting Charlie at a book signing and reception for a new edition of *Wildflowers of North Carolina* by Ritchie Bell and his wife Anne Lindsey. When Charlie learned I had grown up in Stanley and had known the *Magnolia macrophylla* as a child, he offered to meet me in Stanley sometime and show me the site of Michaux's discovery. Later that year when I was visiting family near Stanley, Charlie met me and took me to see the site of Michaux's discovery. I was obviously thrilled to see the site and learn more details of Michaux's discovery from Charlie. In 2007, I took my 7 and 10 year-old nieces to see the marvelous "Elephant Ears" leaves in the woods where I had played with them growing up. This is a picture of that "introduction" (on following page)

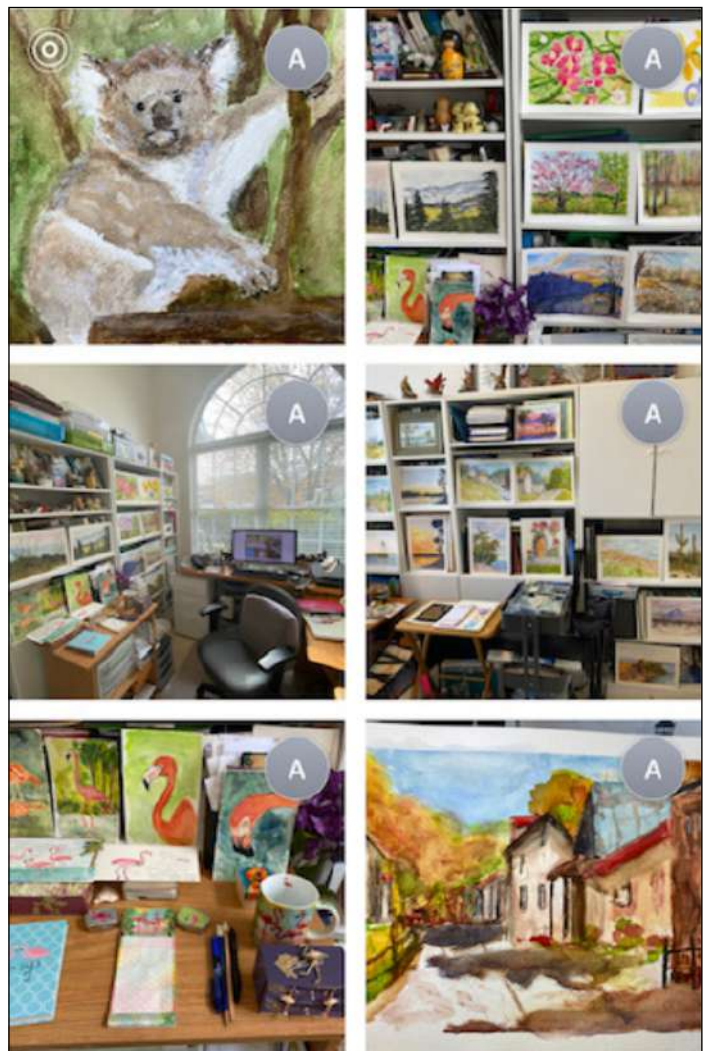
Emily Grace Coble (left) and Gabby Coble (right)
"meeting" *Magnolia macrophylla* in 2007.

In late April 2020, I received an email that reminded me of meeting with Charlie Williams and taking my nieces to see the "Elephant Ears." Less than a week later, I received an email from Charlie telling me about the recent publication of a book, *André Michaux in North America: Journals and Letters, 1785-1797*, that he had co-authored. A few days later, Charlie and I talked and caught up on our respective lives; Charlie's with his new book and my continuing involvement with the Flora of Virginia Project.

Charlie has since sent me a discount coupon that can be used to order this newly published book at a discount price. The book can also be ordered from Amazon. Below is a copy of the discount coupon. If ordered before September 2020, by calling the University of Alabama warehouse at 800-621-2716 and using the coupon code: WMT30, the book's cost will be \$38.00 + shipping and handling.

I have just called in an order for copies of this book, and I look forward to reading it and finding out more about the discovery of my childhood "Elephant Ears," and many other facts about one of the Southeast's most important and interesting botanical explorers.

Pictured below and right, Marion Lobstein in her study and studio with some of her books and artwork



Prince William Wildflower Society

A Chapter of the Virginia Native Plant Society
P.O. Box 83, Manassas, Virginia 20108-0083



Next Meeting, Thursday, July 2, 7:30 - 9:00 pm
Program by Julie Flanagan, Prince William County Urban Forester
Bethel Lutheran Church, Plantation Lane, Manassas, Virginia 20110
Venue subject to change

An Unusual Sighting

In early March, three PWWS members met at Crow's Nest Natural Area Preserve in Stafford, Virginia. This Preserve features 895 acres of tidal and non-tidal wetlands, with eight miles of woodland trails traversing ravines leading down to a trail end with beautiful river views; the other part of the Preserve features a boardwalk with viewpoints of Accokeek Creek. By March, physical distancing was in general practice, so they arrived in separate cars and kept an obligatory six-to-eight foot distance between them. It wasn't hard to step well off the path upon encountering the few others who were out walking the pathways that day.



Along the trail they were excited to come upon a relatively rare, yellow form of spring beauty — *Claytonia virginica forma lutea*. This form has been spotted and reported before by others, and in addition to our group's photo, shown here, you can see photos taken by others and learn more about this particular form by clicking on the link below.

While the flower our members discovered had a yellow and pink tint, another form of spring beauty — *Claytonia virginica* var. *hammondiae* is more yellow without the pink seen in the flower shown left.

https://www.npsnj.org/photo_galleries/photo_pages/claytonia_virginica_forma_lutea.html