

Wild News

The Bi-monthly Newsletter of the Prince William Wildflower Society

A Chapter of the Virginia Native Plant Society

Number 2022-04

July - August 2022

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

Program: Marion Lobstein will present "The Fascinating Milkweeds and Relatives of Northern Virginia"

Log on to spend the evening of July 7, 2022 with our PWWS Charter Member and Botany Chair. Register in advance for this meeting: https://us02web.zoom.us/meeting/register/tZUsd-mvqjgjE9CvrAQ9RbqUThkWSN2JXO0Y. After registering, you will receive a confirmation email containing information about joining the meeting.

In this Zoom presentation for our PWWS Chapter, Marion will discuss the fascinating structure and lifecycles of the milkweeds and their relatives. She will cover the species diversity in Prince William and the broader Northern Virginia area, pollination, and historic medicinal and edible uses of these special plants. PWWS charter member Judy Gallagher will also participate to answer question about her incredible photos of



milkweed pollination that will be part of this presentation. For our November 2020 PWWS membership, Judy presented a fascinating program entitled "Insects and the Milkweed Community" which can be viewed online at https://vimeo.com/48176972. Marion will give a live demo of using the Flora of Virginia App to explore the milkweeds. Members may want to have their Apps available to follow along.

About our speaker: Marion Lobstein is a charter and life member of the Virginia Native Plant Society and of PWWS and has served as PWWS botany chair for many years. She is Professor Emeritus of Northern Virginia Community College where she taught biology for 35 years at the Manassas Campus. As a founding member of the Foundation of the Flora of Virginia Project, she served on its board of directors from 2001-2021. She also taught for UVA Blandy Experimental Farm, the State Arboretum of Virginia, for many summers and does volunteer plant identification courses for the State Arboretum: she is a life member of the State Arboretum and served on its board of directors for many years. Since 1977, Marion has been an active member and Fellow of the Virginia Academy of Science where she found early support for the Flora of Virginia Project along with the support of VNPS. She grew up in North Carolina and earned her BS in Education from Western Carolina University and later earned a Master of Arts in Teaching from UNC-Chapel Hill and a Masters in Environmental Science from George Mason. She and her husband George currently live in Warrenton and are RV enthusiasts. In addition to her continuing involvement with botany and teaching, she is currently spending many happy hours pursuing her interests in watercolor painting.



Photo: Marion presenting her framed watercolor painting of Magnolia grandiflora with VNPS Fall 2021 Auction winners Steve Hryckiewicz and Marcia O'Toole. Marion donated an item for VNPS Fall 2021 Auction, of a watercolor painting of a Virginia species of flowering plant. VNPS member Steven Hryckiewicz was top bidder for the item. Magnolia grandiflora is the flower that he and his wife Marcia O'Toole chose.

President's Message

Summer is in full swing now and meadow flowers will be in their prime soon. This year we are pleased to offer a Summer Wildflower Garden Tour! Details are still fluid, but the date is Saturday, July 30. We plan to offer the tour in the morning before the heat of the day, but weather can be unpredictable. Currently we have lined up the gardens of Val Neitzey and



Cheryl Hancock, respectively. Val lives in Broad Run where she and her husband Shane installed a large wildflower meadow from seed. Their large property includes a water garden and invasive plant challenges. Cheryl lives in her childhood home in the Buckhall area of Manassas and started gardening intensely about ten years ago. She is a collector of hostas but has been adding many natives to her garden steadily over the years. Her garden has been a stop on the Prince William Conservation Alliance's annual butterfly count for several years. Watch for more information to be shared via email.

As noted elsewhere in this issue, our plant sale succeeded despite rain and cold temperatures. While Plant Sale Chair Nancy Arrington thanked our many volunteers, she certainly deserves high praise herself. Our chapter's founder, Nancy has chaired the sale for numerous years and contributes so many of the plants herself. This year she opened her garden for the spring tour and chaired the sale just two weeks later. We are immensely grateful for her leadership in this effort that is so important to our chapter's financial health. Thank you, Nancy A!

Our own Botany Chair and PWWS charter member Marion Lobstein is the featured speaker for our program meeting offered through Zoom on July 7. She will highlight the many native Milkweed species we have in our area. Unfortunately, I will miss this month's meeting. Harry and I will be traveling in Poland, Germany, and the Czech Republic. Though our tour focuses on historic cities, you know that I will be seeking out flowers and trees wherever I can. Perhaps I will find some of our invasive plants in their native habitats. I will be sure to take lots of photos and share them on Facebook.

In case you missed Dr. Cindy Smith's program on "Collectively Building Biodiversity" from our May meeting, you can view it online on the VNPS website, www.vnps.org. The VNPS has a wealth of videos available under the Resources tab. Check out the Vimeo library there and enjoy some videos from the comfort of your home on a rainy or hot, sweltering day.

I hope to arrange a field trip or two this summer. Watch for any notices by email.

Nancy

Prince William Wildflower Society Membership Meeting Minutes Thursday, May 5, 2022, 7:30 p.m. On Zoom

Nancy Vehrs, president of PWWS, called the meeting to order at 7:30 p.m. The upcoming Saturday, May 7 PWWS Plant Sale will be from 10 a.m. to noon. Nancy asked for donations of boxes so people could carry their purchased plants.

The Manassas Bee Festival will be Saturday, June 25, and volunteers will be needed to work at the PWWS booth between setup at 9:30 a.m. and breakdown at 2:30 p.m.

Kim Hosen, Executive Director of Prince William Conservation Alliance, spoke on the concern about proposed data centers in Prince William County. Concerns include the 2,100 acres between Manassas National Battlefield Park and Conway Robinson State Forest, the land next to Prince William Forest Park, and the water quality in areas named for data centers. Kim recommended we send emails of concern to dignitaries and attend a forum to be held the end of June.

Nancy V. introduced the speaker, Dr. Cindy Smith. Her presentation was entitled "Collaboratively Building Biodiversity." Cindy is a bridge to the public from the research done at George Mason University. At the Potomac Science Center near GMU, Cindy works with students in a variety of projects, such as retention ponds, sustainability of natural ecosystems in suburban areas, etc. For example, from April to September they monitor downstream from two water treatment plants. As background, she told us that in 1983 the Chesapeake Bay was green with algae, but after studies found the waste from the plants contributed to the algae, the treatment plants stopped releasing so much of the pollutant, and the water quality in the Bay improved.

Cindy told us of her work with training teachers of kindergarten through grade 12; the teachers then work with students for projects on environmental problem solving, and the projects are highlighted at the annual Student Environmental Action Showcase (SEAS).

Cindy also works with Meaningful Watershed Educational Experiences (MWEE). In the summer there are activities for students at Burke Lake, Accotink Creek, and other sites close to water. Students study land use in the area, water quality, stream monitoring, etc.

It was so nice to hear of all the projects she is working on, as she guides students and the public to a healthier environment.

Karen Waltman, Secretary



UPCOMING EVENTS

Please note:

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

JULY

Thursday, July 7, 7:30 - 9:00 via Zoom. Prince William Wildflower Society Membership Meeting, with Marion Lobstein presenting "The Fascinating Milkweeds and Relatives of Northern Virginia".

Saturday, July 9, 10 am. VNPS's Piedmont Chapter is sponsoring a Shenandoah National Park Drive. Warren & Page County. Join them in a car caravan along Skyline Drive in the North Section of Shenandoah National Park stopping to see flowers, geological formations and views, led by Master Naturalist Richard Stromberg. Register at piedmontvnps@gmail.com

Saturday, July 30, 9 am-12 noon, the Potowmack Chapter will host a Wakefield Field & Forest Walk with the Grass Bunch. Registration required, space limited. See https://vnps.org/potowmack/events/

Sunday, July 31, 8 am, Bird and Nature Walk at Merrimac Farm, last Sunday of every month. Join us! We will see birds, butterflies, plants and more 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. We meet at Merrimac Farm, Stone House, 15014 Deepwood Lane, Nokesville. Dress for the weather, bring binoculars, insect repellent, and camera. Info and RSVP, (703) 499-4954 or alliance@pwconserve.org View the bird list for Merrimac Farm here: http://www.pwconserve.org/wildlife/birds/lists/merrimacfarm.htm See images, on page 8, taken by Nancy Vehrs during the June hike. RSVP appreciated, but not required.

AUGUST

Saturday, August 13, 10 am. Clarke County. Master Naturalists Robin Williams and Mary Keith Ruffner will lead a walk at the State Arboretum of Virginia at Blandy Experimental Farm to see butterflies and the plants that support them. Register at **piedmontvnps@gmail.com**.

SEPTEMBER

September 7 to 15, Urban Tree Summit 2022 — Montgomery Parks and Casey Trees, Washington DC present the eleventh annual conference: Urban Tree Summit. If you wish to learn more and enroll, please visit this website: https://caseytrees.org/urban-tree-summit-2022. Presentations will focus on the health and welfare of trees in our increasingly developed landscapes. Learn from some of the country's leading experts about innovative efforts to plant, protect, and preserve trees in urban and suburban settings. One half-day virtual session (\$25) and three field sessions (\$60 each session).

Saturday, September 17, VNPS annual meeting, Natural Bridge Hotel and Conference Center. Watch your email for details.

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Thanks to Plant Sale Volunteers

Could we have had a worse day for a plant sale?! I'm sure everyone remembers how miserable it was, so I won't go into details. The good news is that our customers were lined up at 10:00 a.m., and we sold almost all of our plants. According to Treasurer Valerie Gaffney our total income was \$4,549, which included memberships and plant sales of \$4,207.

Thanks so much to our wonderful volunteers who supplied plants, dug and potted others' plants, and/or worked on sale day: Tom Attanaro, Susan Beaverson, Brigitte Bégué Hartke, Dee Brown & Glen Macdonald, Tiana Camfiord, Marie Davis, Kathy Dawson, Jeanne Endrikat, Valerie Gaffney, Deanna High, Sandy Jeter, Stephanie Johnson, Diane Liga, Janet Martinet, Brian McDougal, Lois Montgomery (not pictured — she went to get us donuts), Valerie & Shane Neitzey, Christine Sunda, Carol Thompson, Nancy Vehrs & Harry Glasgow, Karen Waltman, Janet Wheatcraft and Adrian Willing. I hope I mentioned everyone, please let me know if I missed someone.

Keep next year's sale in mind as you garden through the summer and fall and set aside or pot up plants that you can contribute. Next time you hear from me will be mid-March with another plant sale on the horizon.

Nancy Arrington, Plant Sale Chair

Below: Valerie Gaffney records the sales and Val Neitzey carries plants.



Below, right: Our soaked-but-happy group of energetic volunteers — thanks, everyone!



Above: The crowd gathers for the start of the plant sale.

Below: Harry Glasgow, Nancy Vehrs, Tom Attanaro and Carol
Thompson pause behind the plants which didn't mind the rain at all.



Jeanne Endrikat, Deanna High and Sandy Jeter









Virginia's Beautiful *Magnolia* Species - Native and Naturalized

Marion Lobstein, Professor Emeritus NVCC and Botany Chair PWWS

The last issue of *Wild News* (May-June 2022) featured the Iris species of our area and the Iris family's taxonomy. The article originally used the term naturalized to describe the Yellow Flag Iris, *Iris pseudacorus*. After consideration, the term was changed to nonnative to make clear this species is not appropriate to plant if you are interested in gardening with natives. A nonnative or introduced species that has

naturalized is not thought to have been present at the time of European colonization of an area but has been introduced and can reproduce and spread without human intervention. A native species is thought to have been present at that time. The Yellow Flag Iris was introduced from Europe after European colonization of the colony of Virginia.

Another example of a naturalized species is the Southern Magnolia or Bullbay, Magnolia grandiflora. This species is native to the southern Gulf states, eastern Texas, northern Florida and up into the Carolinas. It has been planted throughout the coastal plain and piedmont of Virginia and has naturalized in a number of those counties. This article will focus on the five species of native Magnolia and the one naturalized species included in the Flora of Virginia App. The five native species are the Sweetbay or Swamp Magnolia (Magnolia virginiana), the Cucumber-tree or Cucumber Magnolia (Magnolia acuminata),

Umbrella Magnolia or Umbrella-tree (*Magnolia tripetala*), Frazer Magnolia or Earleaf Umbrella-tree (*Magnolia fraseri*), and Bigleaf Magnolia (*Magnolia macrophylla*). The first two species are native to our Northern Virginia area while Umbrella Magnolia is documented just to the west, Frazer Magnolia in southwestern Virginia, and Bigleaf Magnolia in one county in southwest Virginia and documented as naturalized in Fairfax County. The Sweetbay and the Cucumber-tree have the widest ranges: from the southeastern states and up into the northeast. The Umbrella Magnolia and the Bigleaf Magnolia are more southeastern species up into Virginia.

The Bigleaf Magnolia, although the rarest species in Virginia, is of special interest to me. This species was discovered in 1796 by Andre Michaux just outside of Stanley, North Carolina, the small town where I grew up. Trees of Bigleaf Magnolia grew in the woods near my home where I played

as a child and called them "Elephant Ears." "Early Explorations of Elephant Ears (Magnolia macrophyla): a Personal Note," in an article I wrote in 2020 of how I learned about this discovery, available on the VNPS website at https://vnps.org/early-explorations-of-elephant-ears-magnolia-macrophylla-a-personal-note/.

All these Magnolia species are trees that range in height from 18-90+ feet in height. All have large entire leaves that are primarily deciduous in our native species but evergreen in the naturalized Southern Magnolia and can be evergreen or deciduous in Sweetbay. The size and shape of each of these six species are variable from eight inches in Umbrella Magnolia to 40 inches in the Bigleaf Magnolia. The shapes vary from elliptical to "eared" shapes at the leaf bases.

The leaves have petioles and stipules (modified leaf tissue at base of petiole) that cover leaf buds. The stipule scars wrap around the twigs and are a way to recognize species in the Magnolia family in winter conditions.

The aromatic flowers are solitary, showy, and vary in size from about 2

showy, and vary in size from about 2 inches wide in Sweetbay to 16-20 inches wide in Bigleaf Magnolia. The aromatic flowers of Virginia species range from pleasant lemony fragrance to unpleasant in the Umbrella Magnolia. The receptacle of the flower is elongated with the sepals, petals, stamens, and multiple pistils in whorls. There are multiple whorls of fleshy petal-like tepals with the three outer whorl considered sepals and the 2-4 whorls considered petals. There is visually little difference between the sepals and petals and in many reference sources these are referred to as tepals. The flowers are white in all the species except greenish yellow in

Cucumber Magnolia. The Bigleaf Magnolia flowers have rosy to purple spots at the base of the petals. The multiple stamens with elongated anthers and short filaments are in a spiral. The numerous spiraled simple pistils (carpels) each have a prominent stigma, a short style, and a simple ovary. Each simple pistil forms one to two seeds after pollination and fertilization. The primary pollinators are beetle species. Each pistil forms an individual dry fruit that splits open along one suture called a follicle. The cone-like receptacle forms an aggregate fruit of these multiple follicles. The seeds of our species are red in color and are dispersed from the fruits by each follicle opening and the seeds popping out. Each seed is attached to its fruit by a string-like aril. Birds, squirrels, mice, and other small mammals help to disperse the seeds. A number of butterflies, such as tiger swallowtail, Palamedes swallowtail and spicebush swallowtail as well as the Sweetbay Silkmoth, use Sweetbay as a host plant.



Photo by Bland Crowder: The Sweet Bay has a little pineapple

There are numerous uses of our native and naturalized magnolia species. Lumber sources for building, woodworking, and crafting projects are obvious uses. Landscaping and horticultural are also important. Medicinal uses by Native Americans, colonists, and current use are numerous. These uses range from treatment of problems with the digestive, respiratory, and nervous systems as well as for skin problems, weight loss, lessening menstrual cramps, and toothache. The buds and flowers of Magnolia species are edible raw or preserved in brine or pickled. There is debate as to the toxicity of the seed.

Our Magnolia species add beauty to our landscape. Their taxonomic history covered in the next article is also impressive. John Clayton's herbarium specimens from the 1730s and descriptions that formed the basis of the *Flora Virginica* included three of Virginia's Magnolia species. Sweetbay, *Magnolia virginiana*, the first Magnolia species from the American colonies to be introduced into Europe, was collected in Virginia by John Bannister in 1688.

Magnoliaceae, the Magnolia Family in Virginia and the Taxonomy of Virginia Species

Marion Lobstein, Professor Emeritus NVCC and Botany Chair PWWS

Magnoliaceae is a family of trees and shrubs with 2 to 6-12 genera with about 220 species. The family name was proposed in 1789 by A.L. de Jussieu based on the genus Magnolia. This family has an ancient history in the fossil record going back at least 95 million years. Based on evidence from the fossil record, members of this family once were widespread across Europe, Asia, and North America. Today species are only found in the eastern US and Canada, throughout Mexico, Central and South America, the Caribbean, and in eastern Asia, Japan, and Indonesia. This family was not known until the early 1700s when Charles Plumier called a specimen of Magnolia from Martinique and named the genus of this species Magnolia in honor of Pierre Magnol. It is interesting that the first specimen of Magnolia made its way to Europe from the colony of Virginia in 1688 from John Bannister. This was Sweetbay and was given the name of Laurus tulipifera.

The Flora of Virginia manual and App state that there are about 130 species of *Magnolia*. In Virginia there are two genera, *Magnolia* and *Liriodendron*, with a total of seven species that are native or naturalized. Six of these species are *Magnolia* species, and Virginia has all but two of the species of Magnolia found in the United States. The five native species are the Sweetbay Magnolia, *Magnolia virginica* (of Virginia); the Cucumber-tree, *Magnolia acuminata* (the shape

of the leaves), Fraser Magnolia, *Magnolia Fraseri* (named for botanist John Fraser), the Umbrella Magnolia, *Magnolia tripetala* (three petals); and Bigleaf Magnolia, *Magnolia macrophylla* (large leaved). The naturalized species is the Southern Magnolia, *Magnolia grandiflora* (large-flowered). The native range is from North Carolina to Florida and west to Texas. In 1728, Mark Catesby introduced *Magnolia grandiflora* into Europe.

The taxonomy of Virginia's six species of Magnolia has an interesting history. The first edition of Flora Virginica (1739) based on John Clayton's herbarium specimens describes three types of Magnolia, and there are three surviving herbarium specimens from 1734 of these types. Linnaeus in his 1753 Species Plantarium describes four species of Magnolia which are varieties of M. virginiana, three of which are described in Flora Virginica (both editions 1739 and 1762): M. virginiana (Sweetbay) M. virginiana var. glauca; M. virginiana var. acuminata (now M. acuminata, the Cucumber tree), and M. virginiana var. foetida (now M. grandiflora, the Southern Magnolia). The fourth Magnolia species described in the 1753 work was M. virginiana var. tripetala now M. tripetala. The other two Virginia Magnolias are the Fraser Magnolia or Ear-leaf Umbrella Magnolia, M. fraseri, described by Thomas Walter in 1788 and the Bigleaf Magnolia, Magnolia macrophylla, described by Andre Michaux in 1789.

Photo: Bland Crowder



In subsequent editions of *Species Plantarum*, Linnaeus changed the binomials for his four species from *M. virginiana* var. *glauca* to *M. glauca* (1759), *M. virginiana* var. *acuminata* to *M. acuminata* in 1763, *M. virginiana* var. *tripetala* to *M. tripetala* in 1763, and *M. virginiana* var. *foetida* to *M. grandiflorum* in 1759. *M. tripetala* had other synonyms including *M. umbrella* by Louis Desrousseaux in 1792 and *M. frondosa* by Richard Salisbury in 1796.

In 1838 John Torrey and Asa Gray, eminent American botanists, published *A Flora of North America*. For *Magnolia*, they listed and described the following Magnolia species with binomials: Southern Magnolia (*M. grandiflora*), Sweetbay (*M. glauca*), Umbrella-tree (*M. umbrella*), Cucumber-tree (*M. acuminata*), Fraser Magnolia (*M. fraseri*), and Bigleaf Magnolia (*M. macrophylla*).

When Asa Gray published his *Gray's Manual of Botany* beginning in 1848 through the sixth edition in 1887, he continued to use the binomials he and Torrey had used in their *A Flora of North America*. After his death, a seventh edition (*Grays's New Manual of Botany*), updated by Benjamin Robinson and Merritt Fernald, was published in 1908. In this seventh 1908 edition and in the eighth edition by Fernald in 1950 *Gray's Manual of Botany*, the binomials of two of these Magnolia species were changed to currently used ones: Sweetbay updated from *M. glauca* to *M. virginiana* and the Umbrella-tree from *M. umbrella* to *M. tripetala*. In 1897 Nathaniel Britton and Addison Brown had updated these two species to the currently used binomials in their *Illustrated Flora of the Northern United States, Canada, and the British Possessions*.

The Flora of Virginia Manual (1st ed., 2012), also included all six of Virginia Magnolia species and used Magnolia virginiana and Magnolia tripetala. In the 2020 update of the Flora of Virginia App, M. virginiana is now M. virginiana var. virginiana. This is the only change to the Magnolia family's taxonomy in the updated App.

Liriodendron, the Tulip Tree or Tulip Poplar, is the only other Magnoliaceae species found in Virginia. Liriodendron is a small genus of only two species with the second species of this genus found in China and Vietnam. The genus Liriodendron is credited to Linnaeus in his 1753 Species Plantarum. Liriodendron is derived from lirion, Greek for lily, and dendron Latin for tree, referring to the lily-like flowers on the tree. The species epithet tulipifera means bring forth tulips alluding to the resemblance of the flowers to tulips.

John Tradescant the Younger collected the tulip tree during a collecting trip to the colony of Virginia and introduced it in

1688 into Great Britain. Mark Catesby in 1722-26 painted the Tulip tree with a Baltimore Oriole and called the tulip tree Arbor Tulipifera. John Clayton herbarium specimens used by Gronovius for the *Flora Virginica* 1739 and 1762 editions included *Liriodendrum* which Clayton described as *Tulipifera arbor Virginiana*. Mark Catesby, George Clifford, and Phillip Miller in the early 1700s may have used this spelling. Even the famous illustrator George Ehret in his 1741 illustration of Tulip Tree used this spelling. By 1753 Linnaeus spelled the genus as *Liriodendron*.

As you can see from this article, the taxonomy of Virginia species in the Magnoliaceae (Magnolia Family) described in the *Flora of Virginia* manual (2012) and *Flora of Virginia* App (2020) reflect the important role of the colony of Virginia and John Clayton in the *Flora Virginica* for the early identification and naming of most of the Virginia species of Magnoliaceae.



Pictured: Liriodendrum foliis angulatis truncatis, illustrated by George Ehret, 1741.

Save the Date

The Summer Garden Tour is scheduled for the morning of Saturday, July 30!

Prince William Wildflower Society

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



Next Meeting: Thursday, July 7, 7:30 pm, Via Zoom Marion Lobstein: "The Fascinating Milkweeds and Relatives of Northern Virginia"

Birds, butterflies and bees! Every month, PWWS members are invited to join in a bird and nature walk at Merrimac Farm Nature Preserve in Nokesville, on the last Sunday morning at 8 am. Below, recent photos taken by Nancy Vehrs of the native plant garden behind the Stone House, where Asclepias, Monarda, Mountain Mint, Pickeralweed, native Honeysuckle Vine and other delights attract many pollinators. View these images online for full color.

