WILD NEWS

Prince William Wildflower Society

A Chapter of the Virginia Native Plant Society

Web site: *www. pwws.vnps.org*

Number 2012-05 September-October 2012

PWWS MEMBERSHIP and 2012 ANNUAL MEETING will take place Monday, September 17, 2012, 7:30 p.m., Bethel Lutheran Church

PWWS officers will be elected at the meeting. Our program is **"Earth Sangha and the Wild Plant Nursery:" presented by Lisa and Chris Bright.** Earth Sangha is a Buddhist environmental group based in Fairfax County. It was founded in 1997 for the purpose of Buddhist practice and to work with volunteers on ecological restoration projects in natural areas.

Earth Sangha's Wild Plant Nursery began its operation in 2001 with about 20 of the most common woody species in the current location of Franconia Park in Springfield. After 10 years, it now produces 40,000 container plants per year, with more than 220 native plant species from local, wild populations, expanding its emphasis to include moist to dry meadow species. In addition to container plants, the organization also collects over 300 lbs. of local meadow seeds.

We will learn how Earth Sangha volunteers have built the Sangha's Wild Plant Nursery, which has become the D.C. region's most extensive effort to propagate native plants directly from local, wild populations (local ecotype propagation).

Chris Bright is the Sangha's president. Before taking a full-time position with the Sangha in 2004, Chris was a senior researcher at the Worldwatch Institute, a think tank that tracks global environmental and social trends. Chris is the author of numerous articles and one book, *Life Out of Bounds: Bioinvasion in a Borderless World*, the first global, interdisciplinary study of biological invasion written for a general audience.

Lisa Bright is the Sangha's executive director and its Dharma teacher. Lisa has been recognized as a teacher by the main Buddhist monastic order in Korea. She has 12 years of experience studying and propagating the native plants of this region and 18 years of experience working with volunteers.

PRESIDENT'S CORNER

Cool, crisp days and nights beckon! Goodbye to this hot, dry summer. While I usually lament the coming winter with its dearth of flowers, this past summer has not been kind to many local native plants and venerable trees. In addition to relief from record-breaking summer heat, this fall brings new personal challenges.

As most of you are aware, if you read the VNPS *Bulletin,* I am the nominee for VNPS president, with a term of three years beginning November 1. The formal election will take place on September 15. In addition, I offered to remain as PWWS president, and that election will be held at our own annual meeting on September 17. PWWS is well served by an excellent board, so I believe that I can fulfill both roles with the board's support. Our own chapter is very dear to me, and I want us to remain strong and grow. As we adopt some revisions to our bylaws, we have room on our board for more interested members, and I would welcome your participation.

I am humbled and honored to be the nominee for VNPS president, following the nine-year leadership of the tireless Sally Anderson, and such legendary presidents as Nicky Staunton, Mary Painter, and Mary Pockman. The VNPS is our parent organization and handles membership and administrative issues out of an office at the State Arboretum at Blandy Experimental Farm in Boyce near Winchester. Our Board of Directors sets and administers VNPS policy and ties all our disparate chapters into a cohesive, supportive group. The breadth of knowledge and experience on the Board is exceptional. As a non-scientist who loves nature and native plants, I will rely on the expertise that the Board provides. I also encourage members to share with me what you think should be priorities of the VNPS.

Our own Deanna High has been serving as the VNPS webmaster for the last several years and is responsible for all the gorgeous and informative content found there. Have you visited our website at *www.vnps.org*? This newsletter is posted in COLOR on the chapter's page, *http://pwws.vnps.org*, and the header showcases lovely seasonal flowers. There is an events

calendar so members can see what chapters around the state are doing—and join in if they choose. The resources page is filled with links, archives, and brochures. Soon members will be able to renew their memberships online and view a members-only directory. Thank you, Deanna, for your role in taking us this far.

For those members who are members of Facebook and prefer their news to be streamed to them in a newsfeed, PWWS has a FB page, "Prince William Wildflower Society, A Chapter of the Virginia Native Plant Society." Events, photos, and links are posted on Facebook, and many are linked back to the VNPS website. We thank Joyce Andrew who has stepped up and volunteered to be our publicity chair. To ensure that our activities reach audiences far and wide, she will be working with traditional news media as well as digital formats. Social and print media will help us find new audiences and maintain those that we are fortunate to have now.

Our chapter's annual meeting will have lots to offer, so be sure to come a little early. Lisa and Chris Bright of Earth Sangha are two tireless champions of local native plants, and we can learn a lot from them. The required business meeting promises to be brief, and those who attend will be rewarded with a cake in honor of the 30th anniversary of VNPS and a chance at fabulous door prizes. See you soon! ***~Nancy***

Field Trip to Manassas National Battlefield Park

PWWS is fortunate to count *botanist extraordinaire* Marion Lobstein among its members, and she offered to lead a summer field trip to Deep Cut at Manassas National Battlefield Park. With fairly short notice and the assistance of social media and email listservs, word spread far and wide of a field trip for the morning of Thursday, August 23. With 21 people participating on this field trip, we captured a niche group of people from three local chapters available on weekdays.

Laden with walking stick, the *Flora of West Virginia* and other field guides, water bottles, insect spray, and sunscreen, an intrepid Marion distributed checklists to everyone and herded them to the edge of the parking lot. Latecomers had no trouble catching up with the group as the wealth of flora at the start of the trail brought the walking to a halt. As Harry Glasgow says, "You don't get much exercise on a wildflower walk, but you learn a lot of Latin."

A sharp-eyed Helen Walter called attention to many tiny species found amidst the grasses, which Marion identified. Carrie Blair from the Piedmont Chapter shared her expert tree ID skills in picking out persimmon saplings in the meadow and a magnificent chestnut oak along the outer trail. Some of the highlights of the walk for me included swamp milkweed (*Asclepias incarnata*), scaly blazing star (*Liatris squarrosa*), pink wild bean (*Strophostyles umbellata*), monkey flower (*Mimulus ringens*), and forked bluecurls (*Trichostema dichotomum).*
At the end of the Deep Cut walk, Marion and a small group continued to the Unfinished Railroad site to search for the rare American blue hearts (Buchnera americana), *which had been discovered in the area some years ago. While they were unsuccessful in finding that species, most of us felt very fortunate to have found such a lovely meadow at Deep Cut on a fine summer's day. A full list of species found at Deep Cut can be found on the PWWS website and additional photos from the trip are posted on Facebook. Through a cooperative mowing agreement with the staff at Manassas National Battlefield Park, the meadow at Deep Cut should be self-sustaining for years to come.* ***--Nancy Vehrs***

Volunteer at Rippon Lodge Harvest Festival

PWWS needs volunteers to staff a booth at the Rippon Lodge Harvest Festival on **Saturday, September 22**. We'll have our usual complement of brochures as well as some activities for children. Contact Nancy at ***nvehrs1@yahoo.com*** for more information and to participate.

Confessions of a Salamander Lover

Most native plant lovers have two strong preferences as we tend our gardens and forests: we don't like exotic invasive plants **and** we don't like herbicides. Our distaste for herbicides (like Roundup) comes not simply from our love of native plants. Many of us are also particular fans of amphibians because we know the important part frogs, toads, and salamanders play in forest ecology and we have heard that Roundup can be toxic to them. Usually our combined distaste for invasives and herbicides poses no great problem. We fight noxious exotic invasive plants manually by pulling, digging, cutting, torching, or spraying vinegar. But sometimes fighting invasives manually or with vinegar solutions doesn't work. Sometimes, no matter how hard you try, you can never get the best of a well-established invasive infestation. At times like this, even the purest of those among us start to think about herbicides like Roundup.

In my own case, a failed ten-year struggle against Japanese stilt grass (*Microstegium vimineum*) in a native reclamation project at our home pushed me to ask the question: Could I be comfortable using an herbicide? Here's what I found.

The active herbicide in Roundup is glyphosate (more specifically, isopropylamine salt of glyphosate). Glyphosate is a contact herbicide. It must touch the plant either through spray, injection or by manually daubing. It moves from the point of contact into the body and roots of the plant and inhibits some enzymes thus disrupting the production of amino acids. The plant dies. Glyphosate moves through the plant via a metabolic pathway not present in animals, it does

not migrate extensively from point of application, and it degrades quickly. In short, glyphosate is very toxic to plants that it touches, but non-toxic to plants that it does not touch and non-to-slightly toxic in animals. This is the basis for the EPA's original finding that Roundup is "safe and non-toxic." With the EPA's blessing, Monsanto's Roundup (and since the patent expired in 2000, similar products from other producers) has, as we all know, become a very widely used, non-selective herbicide.

But there is more to the story. The Roundup formulation also includes 59 percent "inert" ingredients—primarily water and the surfactant, polyethoxylated tallow amine (POEA). POEA is added to help the glyphosate stick to foliage and better penetrate the waxy leaf surface. As Susan Monheit points out in the Summer 2004 issue of the California Invasive Plant Control Division's *Noxious Times*, "inert" is a very confusing term. Under USA labeling law, "inert" does not mean "inactive," much less "benign." In this case, POEA is anything but "inert."

Numerous studies show POEA significantly adds to the toxic potential of Roundup and is especially harmful to aquatic animals and amphibians. For this reason, there are several glyphosate-only formulations available such as Rodeo® (Dow AgroSciences) and Aquamaster® (Monsanto) that are EPA-approved for aquatic applications. These formulations are meant to be mixed with a surfactant chosen for the purpose of the application by the user. Interestingly, while there has been a great deal of research concerning the toxicity and ecological impact of POEA-glyphosate formulations, there seems to be a relatively small amount of research about other surfactants. (The best summary of surfactant research I could find is "The Ecotoxicology of Surfactants Used in Glyphosate Based Herbicides" found at *www.cdfa.ca.gov/plant/ipc/noxioustimes/noxtimes_archives.htm*.)

So, where did this leave me? Roundup, of course, is readily available just about everywhere in all shapes and sizes. And it is "EPA approved." So theoretically, it is safe except in "aquatic applications." But we all know that vernal pools and ephemeral puddles are the breeding ground for forest amphibians and these water features do not necessarily make "aquatic" situations or amphibian habitat obvious. So for me, any herbicide with POEA is out of the question.

A glyphosate-only formulation thus seemed in the realm of possibility and the first step was finding a supply. I found no glyphosate-only formulations in local stores. And shopping online, I quickly found that it is available only in large quantities. A 2.5 gallon supply of 49 percent glyphosate is more than a lifetime supply for a hesitant, parsimonious potential user like me. So for nearly a year I fretted over the decision to order Rodeo, a glyphosate herbicide with no surfactant. I finally took the step and placed my order.

The next step was application. Without a surfactant it might not be effective, but I still fear surfactants and cannot find enough data to counter that fear. Of course, I also need to protect our native desirables. In the end, I used glyphosate-only and no surfactant with a small spray bottle for coarse spray application and a paint brush for direct application. Both methods have been effective in killing the stilt grass, and I have high hopes that we may finally be able to reclaim the area for natives. In short, I have become a reluctant, but judicious user of glyphosate, as well as the somewhat ashamed owner of 2.5 gallons minus 4 tablespoons of Rodeo!

To learn more, see: *The Noxious Times* (CA Department of Food and Agriculture)
www.cdfa.ca.gov/plant/ipc/noxioustimes/noxtimes_hp.htm

The Wild Ones *Roundup Myth* (Including a design for the aptly named "Tongs of Death" and the "Long Tongs of Death.")
www.wildones.org/download/roundupmyth/roundupmyth.html

The Nature Conservancy's Invasive Plant Management-chemical fact sheet
www.nature.org/ourinitiatives/regions/northamerica/unitedstates/vermont/volunteer/herbicide_wowshortversion09.pdf

--Mike Wenger

Editor's Note: The last source listed by Mike is especially useful for homeowners, as it gives specific guidelines for different kinds of plants and habitats. Please see this article online on our web site at *http://pwws.vnps.org* to link directly to these sources.

[Salamander photo: Courtesy of *Mike and Joyce Wenger;* BRNB Deep Cut field trip and *Liatris squarrosa* photos: Courtesy of *Nancy Vehrs*]

Order Your Copy of the *Virginia Flora* through PWWS and SAVE

Marion Lobstein's long held dream of a true *Flora of Virginia* is about to become a reality in December when the books roll off the presses. Copies are available at $79.99 each plus $6.50 for shipping. To save you money on shipping, PWWS can combine individual orders for a total of **$82.99** each. That's a savings to you of $3.50. **Please make checks payable to PWWS** and bring them with you to the September 17 meeting, or mail to: PWWS Treasurer, PO Box 83, Manassas, VA 20108-0083.

Prince William Wildflower Society Membership Meeting, Monday, July 16, 2012

President Nancy Vehrs called the meeting to order at 7:44 p.m. She welcomed and introduced guests: Virginia Native Plant Society President Sally Anderson, VNPS First Vice-President Nicky Staunton, and VNPS Treasurer Cathy Mayes. Nancy also welcomed new PWWS members Suzy Stasulis and Gordon Olson.

Program: Ethnobotany of the Bull Run Mountains

Nancy introduded the speaker, Susan Leopold, who defined the term ethnobotany as the "scientific study of dynamic relationships between people, plants, and their environment." Her talk described the methods used for her doctoral dissertation on the loss of ethnobotanical knowledge of the Bull Run Mountains. She spoke about the ecological changes since naturalist Henry Allard's historical plant surveys in the 1940s compared to Gary Fleming's ecological communities study in 2000. She also spoke about the other work of Allard, who worked for the USDA, but visited the Bull Run Mountains extensively for his studies. His journals are housed at the University of North Carolina at Chapel Hill, and her presentation included some of Allard's botanical drawings from the journals.

Announcements:

--The VNPS newsletter and the VNPS Web site has the registration information for the state's annual meeting in Richmond September 14-16.

--Instead of a potluck picnic on a weekend afternoon, the PWWS annual meeting will be the usual time and place Monday, September 17, 7:30 p.m. at Bethel Lutheran Church. The program will be presented by Earth Sangha, and elections will be held for the four PWWS officers.

--Cindy Patterson reported that she is working on creating butterfly gardens and monarch waystations at local parks.

--Marion Lobstein said the rollout date for printing the "Flora of Virginia" is December 7, 2012. It will include Gary Fleming's photos in color and Chris Ludwig's "50 Hot Spots to Visit in Virginia." Since the "Flora" is being printed in the U.S., more donations are needed to cover costs.

--Tiana Camfiord announced she was donating some potted blue lobelia plants and encouraged those in attendance to pick them up on their way out.

Thank you to Joyce and Tom Andrew for bringing refreshments. The new Refreshments Chair, Rose Breece, furnished drinks.

In attendance: *Jeanne Fowler, Marion Lobstein, Helen Rawls, William Hendrickson, Carol Thompson, Joyce Harman, James Ianich, Carrie Blair, Charles Darlington, Sheri Shambor, Gary Knipling, Sally Anderson, Cathy Mayes, Yvonne Olsen, Andrea Kinder, Suzy Stasulis, Betty Truax, Cindy Patterson, Jan Gubrud, Nicky Staunton, Rose Breece, Helen Walter, Gordon Olson, Janet Wheatcraft, Stanley Reynolds, Joyce Wenger, Mike Wenger, Sandi Smith Piccirillo, Nancy Arrington, Deanna High, Jack High, Tiana Camfiord, Charles Plymire, Tom Andrew, Joyce Andrew, Charles Smith, Nancy Vehrs, Harry Glasgow, Mary-Keith Ruffner, Karen Waltman. (40)*

--Respectively submitted, *Karen Waltman,* Secretary

EVENTS: FALL 2012

SEPTEMBER

Saturday, September 22, 11 a.m. to 4:00 p.m. 10th annual Heritage Harvest Festival, Rippon Lodge Historic Site, 15520 Blackburn Road, Woodbridge. Lectures and demonstrations will continue throughout the day from local history, gardening and nature groups. Enjoy music, food, crafts, kid's games and activities. House and cemetery tours are offered all day. Admission is $7. Call (703) 499-9812.

Saturday, September 22, 9:00 a.m. to 3:00 p.m. Potowmack Chapter's Fall Native Plant Sale, Green Springs Garden, Alexandria, Va. (See *pwws.vnps.org* for map to Green Springs Garden.) Native plant vendors will be in attendance.

Saturday, September 29, 8:00 a.m. to 12 Noon. Prince William Forest Park. National Public Lands Day

NPLD is a great opportunity to get your hands dirty for a good cause. Help the park clear trails, build benches, paint fences and more! RSVP by emailing *PRWI_Info@nps.gov* or calling the visitor center at (703) 221-4706. Thanks to REI of Woodbridge and Fairfax for the pizza lunch to follow for all of our volunteers!

OCTOBER

Saturday, October 13, 11:00 a.m. to 4:00 p.m., Prince William Forest Park Heritage Festival. Don't miss this annual event! Heritage Festival celebrates the history of Prince William Forest Park and our surrounding communities through music, dance, blacksmithing and woodworking demonstrations, and kids games and activities!

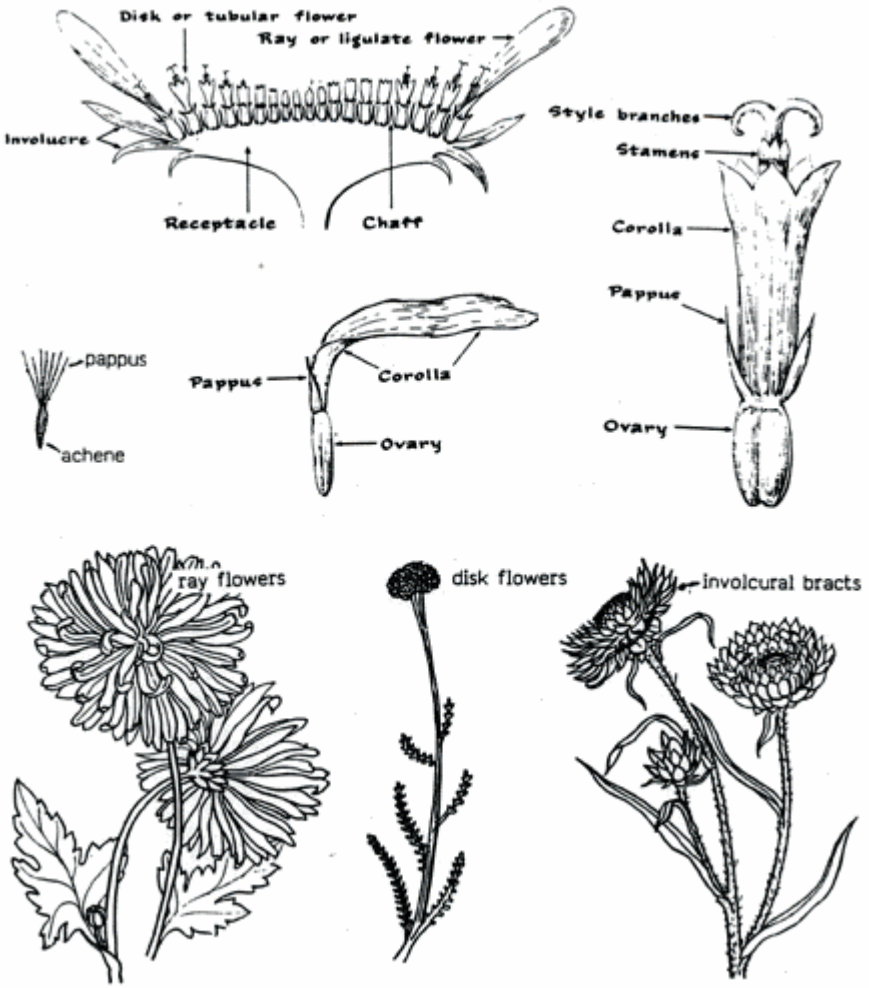
Saturday, October 13 and Sunday, October 14, 9:00 a.m. to 4:30 p.m (both days), ArborFest, Virginia State Arboretum at Blandy Experimental Farm. This annual event features vendors selling perennials, shrubs, trees, and fine items for the garden. Includes children's activities, food, gardening information, and more. $10 per car admission fee.

Sunday, October 14, 11:00 a.m. to 1:30 p.m. Piedmont Chapter Second Sunday Walk at ArborFest. Join VNPS President ***Sally Anderson*** for an informal tour of meadow and wetland to enjoy and identify native plants and grasses. Meet at the amphitheater. During Blandy's Arborfest there will be a $10 per car admission. For more information, email *piedmontvnps@gmail.com*

Overview of Changes to Asteraceae and Aster Species Found in Northern Virginia to Upper Shenandoah National Park

This time of year, late summer into early fall, the wildflowers we enjoy (or may not enjoy in the case of ragweed allergy sufferers) are dominated by members of the composite family Asteraceae. From Northern Virginia out to the upper part of Shenandoah National Park (SNP), there are approximately 150-200 species of composites that bloom from September into late autumn. Of these species, roughly one quarter are species of two genera – approximately 25 species of goldenrods ***(Solidago and Euthanmia)*** and 25 species of asters (now transferred to a number in genera). In this article, the "aster" species will be the focus. Goldenrods will be covered in other articles to be posted on the "Botanizing with Marion" web link found at *http://pwws.vnps.org*.

The term "aster" is derived from a Greek word for star and refers to the shape of the flower head. In the 1990s-based analysis of the genetic material of many species of asters, scientists concluded that true species of the genus Aster are Eurasian species and that our North American native species should be reassigned to other genera. Differences in the flower structure and fruits also were used in the process of splitting up the *Aster* genus. In our area (Northern Virginia through the upper half of SNP), approximately 25 native species of asters are divided into five genera—*Doellingeria*, *Eurybia*, *Ionactis*, *Oclemena,* and *Symphyotrichum*. Only *A. tataricus*, a naturalized species from Asia remains in the genus *Aster.* The history of these "new" genus names will be discussed in the accompanying article on the taxonomic history of the "aster."



Virtually all of our "aster" species are perennials with alternate leaves and often, prominent basal leaves. Most species have fibrous root systems and some species have rhizomes (underground storage stems). As composites, the flower heads (capitula) made up of many separate flowers with a leafy cup or involucre of bracts (modified leaves) (called phyllaries) on the lower surface of the head. In "aster" species, flower heads are made up of both petal-like ray flowers that can vary in color from white to pink to blue to purple as well as tubular disk flowers that are usually yellow but can turn purple to brown with age. In various species of "asters," these ray flowers are pistillate (female) flowers that can be pollinated and produce fruits while in other species they may be sterile. The disc flowers are perfect (bisexual with male and female structures) and are fertile. In both types of flowers the typical flower parts the 5 petals are fused into a corolla (forming a ligulate or tongue-like "petal" in the ray flowers and a tube in the disc flowers). The sepals are modified into bristle-like pappi (pappus, singular term) that assist in wind dispersal of the fruits. If stamens are present they are 5in number and the anthers unite to form a ring around the style of the pistil of the female structure. The female part or pistil has an inferior ovary (below the attachment of the pappi or modified stamens and the corolla), an elongated style, and a stigma with two branches. These inferior ovaries are embedded in the base or receptacle of the flower head or capitulum.

All flowers of this genus are pollinated by insects such as bees, bumblebees, butterflies, moths, wasps, beetles, and even flies. Species such as the New England aster are often used in butterfly gardens. The "Butterfly Website"(*butterflywebsite.com/butterflygardening.cfm*) is a good website for flower species for butterfly gardening. (You may also want to note PWWS's forthcoming updated brochure on Butterfly Gardening, which will also be made available on our website, *pwws.vnps.org*.) Mature aster flower heads that contain dry fruits called achenes or cypelae sport a variety of shapes and are important in identification of species. In these fruits, there is only a single seed closely surrounded the seed coat (derived from the ovary wall). The bristle-like pappi aid in the

wind dispersal of fruits of "aster" species (*http://www.scientificjournals.org/journals2007/articles/1001.htm*). Medicinal and culinary uses of asters have been more limited than that of other groups of composites. However, the young leaves of the large-leaved aster are recommended as greens in edible plant books. Various American Indian tribes did use native species of asters for a wide variety of medicinal purposes ranging from teas to dried leaf/root preparations to treat fevers, diarrhea, stomach problems, pregnancy complications, colds, wounds and abrasions, skin eruptions (such as in poison ivy dermatitis), nosebleeds, and a host of nervous system complications such as epilepsy and mental illness. The Iroquois used a preparation as a love medicine or potion. Other tribes burned dried aster flowers as incense to attract game such as deer or to drive away evil spirits.

It seems a daunting challenge to identify aster species with traditional wildflower guides such as Peterson's or Newcomb's, even older floras. To learn the "new" names is an additional challenge, but will help to keep our minds sharp! It is well worth the effort to identify these beautiful species of composites found in our area.

A chart of our species of "asters" with name changes is included in the taxonomic history, below. [Composite flower drawing: Anon., *http://www.horticulture.lsu.edu*]

Taxonomic Changes for Regional Species of Asteraceae

In modern taxonomic treatments, the genus *Aster* has been radically altered for our native "asters"! Based on molecular (DNA) and morphological (physical characteristics) evidence, our area's native "asters" have been reassigned, as their original genus is now divided into five other genera— *Doellingeria, Eurybia, Ionactis, Oclemena,* and *Symphyotrichum*. Our only remaining *Aster* species is the Tartarian aster, *Aster tataricus,* an introduced species from Asia. That species and many other Eurasian asters are primarily still classified in the genus *Aster*. According to molecular DNA studies, our native asters are more closely related to *Solidago* (goldenrods) and *Erigeron* (daisy fleabanes) species than the Eurasian asters.

A table, below, summarizes the information on the taxonomy of our "asters" authorities (who first assigned the genus name) and dates, the derivation of each genus name, and a list of our area species in each genus. As you will notice, these are not new or recent genera. The latest date of these genera being proposed is almost a century old, 1903!

The history of the use of the name "aster" goes back as early as 2,300 years ago with the Greeks. Greek naturalists, such as Hippocrates, Aristotle, and Theophrastus, and the Romans Dioscorides and Pliny, all used the name of Aster. In the middle ages, many herbalists used the name or variations as they described medicinal uses of this plant. In the 1600s, a controversy among herbalists and botanist occurred as to whether there is only one species of Aster or multiple species. Around the same time, there was an influx of North American Asters into Europe. Carl Linnaeus in the mid-1700s recognized twenty species of Aster. In the 1762 second edition of *Flora Virginica,* John Clayton and Johann Gronovious noted 14-15 species of *Aster*. By the early 1800s, the Frenchman Alexandre De Cassini introduced the genus *Eurybia,* and the German Christian Nees von Isenbeck in 1832 introduced the genera *Symphyotrichum* and *Doellingeria.* In the early 1800s, Asa Gray and John Torrey used other genus names, such as *Eurybia,* to separate *Aster* species, but Gray later decided to lump the asters into one genus in his *Gray's Manual of Botany* (1848). In the late 1800s and early 1900s, the American Edward Lee Greene proposed *Ionactis* (1897) *and Oclemena* (1903). Nathaniel Britton and Addison Brown, in their *Illustrated Flora of the Northern United States, Canada, and the British Possessions,* used *Eurybia* as a synonym for *Aster glomerulus,* and *Doellingeria* and *Ionactis* as valid genera**.** As late as 1991, Arthur Cronquist, in the second edition of the *Manual of Vascular Plants of the Northeastern United States and Adjacent Canada,* recognized *Ionactis* as a valid genus. It was only in the mid-1990s, however, based on new molecular (DNA) and morphological evidence, that Guy L. Nesom reintroduced the use of the "new" genera of *Doellingeria, Eurybia, Ionactis, Oclemena,* and *Symphyotrichum* to separate our native asters from Eurasian aster. It has been a long and complicated journey of naming and renaming our beautiful fall asters, and there will probably be more changes to come!

Resources for further reference

***Good online history of genus Aster*:**

"The Pre-Clusian History of Botany in Its Relation to Aster," by Edward Sanford Burgess [the then-authority on genus *Aster].* In the *Memoirs of the Torrey Botanical Club,* Vols 8-9, New York: The Torrey Botanical Club (1902*).* Source: *http://books.google.com/books* (Precise link available at http://pwws.vnps.org)

"Species and Variations of Biotian Asters with Discussion of Variability in Aster," by Edward Sanford Burgess. In the *Memoirs of the Torrey Botanical Club,* Vol. 10, New York: The Torrey Botanical Club (1906). Source: *http://books.google.com/books* (Precise link available at http://pwws.vnps.org,)

Good online general articles on changes to genus Aster:

"The Curious Case of the Disappearing Asters," by Alan Weakley, UNC Herbarium Curator, in "Report from the Herbarium," found at *www.herbarium.unc.edu/3-4-04.pdf*

"Aster La Vista?" in *The American Gardener*, American Horticultural Society, found at *http://www.ahs.org/publications/the_american_gardener/pdf/0411/GardNotebookpp_46-48.pdf*

"Name Changes in *Aster*," found at *http://en.wikipedia.org/wiki/Aster_(genus)*

"Name Changes in Aster by Guy Nesom, found at *http://www.guynesom.com/NameChangesInAsterWEB.htm*

"Recent name changes in the aster family (Asteraceae)," by Guy Nesom, found at *http://www.guynesom.com/AsternamesWEB.htm*

Changes in Asteraceae and Aster Species Found in Northern Virginia to Upper Shenandoah National Park

"Aster" Genera	Authority (who proposed the genus) & date proposed	Meaning	"Aster" Species in our area and "modern" names
Aster	Carl Linnaeus 1753	Greek for "star"	*A. tataricus* Tartarian aster-no change (an introduced species from Asia)
Doellingeria	Nees (Christian Nees von Isenbeck) 1832	Named in honor of German botanist Ignatz Doellinger	*A. infirmus* Cornel-leaved aster now *Doellingeria infirma* *A. umbellatus* Flat-top white aster now *Doellingeria umbellata*
Eurybia	Alexandre De Cassini 1820	Greek for "wide" and "few (small and wide) rays	*A. divaricatus* White wood aster now *Eurybia divaricata* *A. macrophyllus* Bigleaf aster now *Eurybia macrophylla* *A. schreberi* Schreber's aster now *Eurybia schreberi*
Ionactis	Edward Lee Greene 1897	Greek for "violet rays"	*A. linariifolius* Stiff-leaved aster now *Ionactis linariifolius*
Oclemena	Edward Lee Greene 1903	Derivation unknown	*Aster acuminatus* Mountain aster now *Oclemena acuminata*
Symphyotrichum	Nees (Christian Nees von Isenbeck) 1832	Greek for "born (grown) together" and "hair" (perhaps referring to the hair-like pappi)	*A. concolor* Eastern silvery aster now *Symphyotrichum concolor* *A. cordifolius* Blue wood aster now *Symphyotrichum cordifolium* *A. dumosus* Bushy aster now *Symphyotrichum dumosum* *A. ericoides* Heath aster now *Symphyotrichum ericoides* *A. laevis* Smooth aster now *Symphyotrichum laeve* *A. lateriflorus* Calico aster now *Symphyotrichum lateriflorum* *A. lowrieanus* Lowrie's aster now *Symphyotrichum lowrieanum* *A. novae-angliae* New England aster now *Symphyotrichum novae-angliae* *A. oblongifolius* Shale barren aster now *Symphyotrichum oblongifolium* *A. patens* Late purple aster now *Symphyotrichum patens* **A. pilosus* White heath aster now Symphyotrichum pilosum *A. prenanthoides* Crooked-stem aster now *Symphyotrichum prenanthoides* *A. puniceus* Purple-stem aster now *Symphyotrichum puniceum* *A. sagittifolius* Arrow-leaved aster now *Symphyotrichum cordifolium* *A. shortii* Short's aster now *Symphyotrichum shortii* *A. simplex* Panicled aster,tall white aster now *Symphyotrichum lanceolatum* ssp. *lanceolatum* A. undulatus Wavy leaved aster now *Symphyotrichum undulatum* *A. vimineus* Small white aster now *Symphyotrichum lanceolatum* ssp. *lanceolatum*

NATIVES FOR THE GARDEN

BY NANCY ARRINGTON

New England Aster

(*Symphyotrichum novae-angliae)*

Many of our native aster species are good candidates for the garden and New England aster is one of the best. It has been a garden favorite for years, and along with New York aster, is a parent of the popular Michaelmas daisies. Though New England aster's native habitat is most often a wet meadow, it is an excellent plant for the perennial border when given proper growing conditions: a deep rich moist soil and at least a half day's direct sun. A mulch will help retain moisture and plants will need supplemental watering during dry spells (water at base of plants to avoid mildewed leaves).

New England aster can be used in the rear of a border or in the center of an island planting and allowed to reach its ultimate height of five feet. Plants will need staking to remain upright. If you prefer a shorter plant, cut back to a foot or so two or three times before mid-summer. Very dense and bushy plants can be had by cutting back almost to ground level several times in June and July. Plants can also be pinched in the same fashion as chrysanthemums, resulting in more but smaller blossoms.

Blooming from August into October, the one-inch lavender flowers (color varies and may be rosy lilac, violet purple, pink, or sometimes white) with yellow centers are perfect companions for goldenrods and late blooming sunflowers. For an especially pleasing color association, combine New England aster and ironweed. Plants are a food source for pearly crescentspot and painted lady butterflies, and cut flowers are excellent in arrangements.

Plants can be propagated by division and should be divided every three years, preferably in spring. Seed can be sown immediately after collection in an outdoor seed bed for spring germination or stored in a cool, dry place for spring sowing. Sow heavily, as germination will be poor. Plants can also be propagated by tip cuttings taken in May or June before flowering shoots develop. **–Reprinted from the November-December 1987 issue of *Wild News*.**

[Image: *Aster cordifolius*, now *Symphyotrichum cordifolius,* Johann Christoph Keller, 1737-1796, Engraver, *New York Public Library Digital ID116388,accessed at http://digitalgallery.nypl.org*. Photos: *Symphyotrichum ericoides*, Marvin G. Blomquist, NPIN Image ID 19275; *Symphyotrichum novae-angliae*, R.W. Smith, NPIN Image ID 31028; both accessed at *www.wildflower.org*.]

PRINCE WILLIAM WILDFLOWER SOCIETY

A Chapter of the Virginia Native Plant Society

P.O. Box 83, Manassas, Virginia, 20108-0083

Combined Annual & Membership Meetings, Monday, September 17, 7:30 p.m.

"Earth Sangha and the Wild Plant Nursery," presented by Lisa and Chris Bright

Bethel Lutheran Church, 8712 Plantation Lane, Manassas, Virginia 20110