WILD NEWS

Prince William Wildflower Society

A Chapter of the Virginia Native Plant Society

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

Number 2012-06 November-December 2012

Prince William Wildflower Society
Membership Meeting
Monday, November 19, 7:30 p.m.
Bethel Evangelical Lutheran Church
Manassas, Va.

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

Our November program will feature speaker **Jeff Overton** from the Chesapeake Bay Foundation. Jeff will talk about the problems facing the Chesapeake Bay and its watersheds, solutions to the problems, and how we can all help. Refreshments will be served and doorprizes will be awarded! All are welcome. PWWS Membership meetings are free and open to the public.

President's Corner, November 2012

The 2012 election is finally behind us, and we can now enjoy our evenings uninterrupted by robo-calls. If anyone would like to fill a few evenings learning about Virginia's ecosystems, I have copies of a DVD of the 2012 VNPS Winter Workshop available for lending. The program was entitled "Virginia's Ecosystems: Fields, Forests and Freshwater" and featured four separate lectures.

We have exciting news for Prince William County residents who seek more opportunities for passive recreation: the planned opening of a new park by July of 2013. **Dove's Landing** is a 235-acre undeveloped property located along the Occoquan River, just upstream from Lake Jackson. The county has owned the land since 1996, but it has been closed to the public. Based on new interest by the Board of Supervisors, county staff is reaching out to partners such as PWWS, the Prince William Conservation Alliance, Prince William Trails and Streams, and others to prepare an inventory and management plan for the property. This is all part of a necessary Comprehensive Plan amendment to convert it into a passive recreation park. With one-mile of frontage buffer on the Occoquan River, the land includes at least two high quality wetland areas, as well as significant floodplain and upland forests. A considerable trail network already exists, so exploration of this new area should not require more infrastructure beyond a parking lot. Watch for news and volunteer opportunities associated with this new park.

Speaking of volunteers, I wish to thank **Tamie Boone** and our new vice president, **Carol Thompson**, for staffing the PWWS table at the Harvest Festival at Rippon Lodge in Woodbridge. We had fun! If anyone else would like to assist with such events, please let me know so we can develop a list of interested volunteers.

See you at the meeting on November 19 when we learn what is new with the Chesapeake Bay.
--Nancy Vehrs

The Fall Check-Off List for the Naturalistic Garden. Staff at Mt. Cuba Center in Delaware offer tips on preparing your native plant garden for winter at *www.mtcubacenter.org/images/PDFs-and-SWFs/Fall_Check_Off_List.pdf.* Tips include what to do with leaves, how to support birds and wildlife, and other timely advice to help you put your native garden to bed. *--Deanna High*

Prince William Wildflower Society Annual Meeting, Monday, September 17, 2012 7:30 p.m., Bethel Lutheran Church, Manassas, Va.

President Nancy Vehrs opened the meeting at 7:35 p.m., welcomed everyone to the annual meeting, and introduced the guest speakers, Lisa and Chris Bright from Earth Sangha.

Program: A power-point presentation introduced us to the beginnings of Earth Sangha's Wild Plant Nursery in 2001 in Franconia Park and to the Sangha's current work. The Brights and volunteers of the Wild

Plant Nursery propagate exclusively from the wild and collect seeds from a variety of habitats. Lisa explained how they collect seeds in the fall and how the seeds are cleaned and stored. Plants are started and potted for sale at the nursery.

An annual plant sale is a fund raiser for them, and this year the Wild Plant Nursery's plant sale was Saturday, September 30. They also sell Rising Forests Coffee grown in the Dominican Republic as part of their charitable work in that country.

Nancy thanked Lisa and Chris and a $75 check was presented to Earth Sangha from PWWS to support their work at the Wild Plant Nursery.

Business Meeting: Nancy announced that 2012 was the 30th Anniversary for the Virginia Native Plant Society, and she introduced the following charter members who belong to our chapter: **Nancy Arrington, Jeanne Fowler, Frances and Phil Louer, Marion Lobstein, and Nicky Staunton.**

Changes had been suggested for the PWWS Bylaws and sent to the membership for approval. The motion passed unanimously.

Nancy asked if there were questions on the 2013 proposed budget that was also sent to the membership, and there were none. The motion passed to accept the proposed budget.

Charles Smith, a member of the nominating committee, was asked to conduct the election of PWWS officers who will serve a two-year term from November 1, 2012 to October 31, 2014. The slate was presented: Nancy Vehrs, president; Carol Thompson, vice-president; Diane Flaherty, treasurer; and Karen Waltman, Secretary.The motion to elect the slate of officers was passed unanimously.

Nancy Vehrs announced that people can now pre-order copies of the *Flora of Virginia* that will be available in December. Marion Lobstein has copies of the order form, plus there is a link to the form on *http://pwws.vnps.org.*

Deanna High is stepping down from the position on the VNPS board of Director-at-Large, responsible for web development. Nancy thanked her for the work she had accomplished for VNPS.

Doorprizes: Jeanne Endrikat: Nancy Hugo's *Seeing Trees*; Mida Page and Frances Louer: both received *Common Native Trees*; Marion Lobstein: a hummingbird Christmas ornament; Rose Breece: framed crewel work; Carol Thompson: wine tasting certificate for two.

Nancy invited all to enjoy the anniversary cake provided by PWWS.

Respectively submitted,
Karen Waltman, PWWS Secretary

Managing White-Tailed Deer: The Third Priority of the VNPS Conservation Program?

By Charles Smith
Manager, Natural Resource Management and Protection Branch, Fairfax County Park Authority; past President and current Conservation and Education chair, Prince William Wildflower Society

The Virginia Native Plant Society formed thirty years ago around two basic principles: appreciation of our native flora and a desire to protect it. The first priority of the VNPS conservation program was to influence human behavior to stop or minimize habitat destruction and preserve good examples of our native plant communities.

In the 1990s VNPS added a second conservation priority: combating the spread of non-native invasive species (NNIs). This strategy arose from a growing realization that species introduced by humans over several centuries are threatening the integrity of our native plant communities. Whether the introduction of cheat grass in California, or the chestnut blight in eastern North America, NNIs have dramatically altered our landscapes.

These first two VNPS conservation priorities remain more important today than ever. But there is a critical need to add a third conservation priority to the VNPS program: controlling populations of white-tailed deer.

Humans arrived in North America over 13,000 years ago. Once our species arrived, we, not wolves and mountain lions, gradually became the top predator controlling populations of large herbivores. Many of those species eventually went extinct. The white-tailed deer nearly joined their ranks by about 1900, with very few deer left in the state.
In the mid-20th century, Virginia joined many other states in reintroducing white-tailed deer to supplement the few deer left and increase numbers for sport hunting. From the 1950s through the 1980s two things happened that greatly contributed to the increase in the number of deer. First land use shifted

away from agriculture toward suburban and urban uses. Contrary to commonly held beliefs, suburban landscapes do not take away deer habitat - they create it. Deer are adaptive animals. Suburban development creates preferred edge habitat for deer, and human landscapes provide high concentrations of edible plants close to the ground where the deer can get to them. You can grow more deer in suburbia than you can in a purely forested landscape.

The second major factor is that few people hunt. Deer are a prey species that relies on predation to control their populations. Without predation they can double their numbers in as little as one year. With almost no hunting pressure in suburban areas and declining hunting pressure in rural areas, deer numbers have skyrocketed state-wide. In many areas of the state, deer population numbers are at more than three to eight times the densities that native plant communities can sustain.

The result is that our remaining forest ecosystems are decimated. Deer eat everything native with few exceptions. They eat almost all of the forbs in the forest as well as all shrubs and trees within 5 feet of the ground and the majority of the acorns and hickory nuts. They have now removed most vegetation from many of our forests below 5 feet. The results include the disappearance of most of our forest bird species in many areas due to loss of the understory, the loss of many of our woodland forbs, and a change of our forest stand composition to a few species such as tulip tree, American beech and red maple that have smaller seeds and appear to be less palatable to deer. As our forests are oversimplified we lose native species and NNIs explode and become the dominant understory. Once the existing trees die, there will be little to replace them.

In 2008 the USDA Forest Service began to make dire predictions about eastern forests due to the over-browsing by white-tailed deer. The problem is so severe that even if we could reduce the number of deer immediately to within ecologically sustainable levels, it would take many decades if not centuries to recover our native plant communities. If we act soon we can retain enough native plant stock and seed that many species could recover within remaining forests and repopulate surrounding areas over time. This is even more critical in the face of climate change in the expected shift of species and communities across the landscape.

It is time for VNPS to join with USDA Forest Service, the Virginia Natural Heritage Program, landowners and managers in Virginia, the Maryland Native Plant Society and others in supporting and urging landowners, agencies and individuals to reduce and manage the number of white-tailed deer in order to protect our native flora and the communities in which they live.

Nicky's Nature: November 2012

"Thankful for a Wonder of Nature: Eastern Buck Moth" (*Hemileuca maia* of the Saturniidae family, the Silk Moths)

October 24 was a warm afternoon and I was toiling to remove Japanese honeysuckle smothering some young *Ilex verticillata* and putting down mulch.

Being close to the ground, as a small child would be, it is easier to notice small things and slight movements. "What to my wondering eyes did appear?" but a fat, striped hairy caterpillar creature with tiny black and white wings. This strange creeping insect was struggling laboriously across the concrete floor of the carport, dragging a nearly 2" abdomen and heading toward the woods. Odd as it was, it looked familiar, and yes, it was a male Buck Moth emerging from its summer nap within a snug cocoon. Initially, I speculated that it had begun pumping fluid into its wings and been interrupted, which would mean death for a Lepidoptera.

Several years ago, when I saw a more fully developed female Buck moth walking its way toward the woods edge, I remembered it needed a tree to hang on to complete pumping up and to get started on this stage of her life. I still wonder if it is abnormal, or just necessary, for the moth to climb up a tree to be able to fly. This fat Buck Moth lady just could not lift her body weight with her half-developed new wings. Would it be possible if she released excess fluids once her wings were fully developed? This species' females have wiry antennae. Males' antennae are feathered, all the better to sense pheromones of the females that they need to locate for mating.
These Buck Moth caterpillars may have defied their natural behavior prior to entering the pupae stage. Their natural cycle will have them reach their final instar while eating leaves of their host (oak trees, usually) and when ready, drop to the leaf duff under the trees where they will spend the summer inside the cocoon, under the leaves. Both caterpillars I write about appear to have summered in their cocoon near

my house. I had seen Buck Moth caterpillars crossing the concrete and wooden bridge in June.

This new Buck Moth crawled onto a nearby small metal sign that I offered it and I transported the awkwardly fat moth to a nearby tree. Immediately, it grabbed a little twig and held on tightly ... 3:30 p.m. I returned at 5:30 and it was doing very well, having pumped the fluids through its wings. It would live! The last image was at 5:40 p.m. Then, I came inside for the night. I expected it to be gone the next morning. It was.

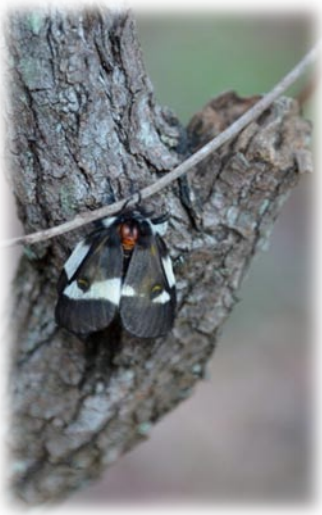
A wondering thought: Does this moth have to launch its flight from a height to get a glide and catch an airlift? Adult Buck moths do not eat, so their mission for the night is to locate a mate, with the female laying her eggs girdling a small twig or branch of their favorite host plant, *Quercus* species. Then, their life cycle is complete.

Isn't this exciting! Being alert, aware, and curious coupled with being able to see life surrounding you is a true blessing. Next, understanding it and appreciating wildlife around you leads to protecting it. It all begins with being thankful.

Share your wonder and awe with a child if you can, but if there are none around you, adults can be introduced to nature. One is never too old for nature! All will thank you, as will Mother Nature—for bringing her new friends.

Notes on the Eastern Buck Moth (*Hemileuca maia*), one of fifteen species in the Silk moth family Saturniidae. Size is similar to the Io Moth, with a wing span of 2 to 2 ½ inches.

The Buck Moth is a beautiful black and white daytime moth giving an initial impression of a butterfly based on its daytime activity, size (wings: 2.5" span) and strong flight. Distinguished not only by the black and white coloration of its wings and abdomen, the males have a bright red tuft at the terminal end of the abdomen; the female is more black and white with slight red tinge. *Quercus* species are favored host plants for the Buck Moth larvae. May is the month they appear and cause alarm because of their numbers, clustered by gregarious behavior in their genes. The Buck Moth caterpillars pass through the usual instar growth of Lepidoptera. They are nearly 2" long as adult caterpillars and during the final instar, their black exoskeleton form is shed, and a beautiful new lighter colored caterpillar emerges with a red-orange head; feet and pale spines replace the previous black form. Beware: these spines are the species' protection and contain venom that will cause nausea, pain of a bee sting, and rash.



May: Look on oaks for large clusters of black spiny caterpillars. Nearby, on the same tree, you are likely to see a twig of their tiny pale golden egg clusters girdling a twig. Though the crowd of caterpillars is of a frightening number, they and the oaks have evolved over eons with this interaction. These Lepidoptera guests do not harm the oaks. Do not kill these caterpillars, rather, visit them daily and keep a log of their growth and any interesting behavior you see. This year's brood, while clustered on a branch at my sight level, would be tightly grouped and every second or so, one or two caterpillars would rise up from the heap and seem to either be looking around or getting air. Who knows what the behavior revealed? Not I. However, I could enjoy this comical action and appreciate their letting me see how they live. This year, I witnessed the Buck Moth caterpillars in their next to last instar stage migrating end to end from one location tree to another. They formed a strange, long line of little black caterpillars resembling a thin snake.

Summer: Caterpillars are in their cocoons, experiencing their metamorphosis.
Late September/October: The moths emerge to mate and the females lay eggs on Oak tree twigs. The Buck Moth life cycle thus ends and begins anew.

--Nicky Staunton, Rocks Edge Holler, Madison County, Va.

Goldenrods: Falsely Accused?
By Marion Lobstein

Goldenrods are one of the most maligned, misunderstood, and unappreciated groups of our native plants. In Europe, where there is only a single native common species, *Solidago virgaurea*, horticulturists have developed many varieties for enthusiastic gardeners. Many of our native species were introduced into Europe during the 1700s, where some have naturalized and are considered invasive. In the U. S., there are approximately 95 species of the goldenrod genera *Solidago and Euthamia* (the flat-topped goldenrods). In Virginia, there are 38 species reported in the Digital Atlas of the Flora of Virginia, twenty of the species are reported in our area. Goldenrods, with the exception of "Silver rod" (*Solidago bicolor*), which has almost white flowers, have flowers of a golden yellow color. The genus name *Solidago* means "to make whole," reflecting the centuries-old belief in the healing wounds property of various species. One of the classic names for goldenrods is "woundwort." The genus name *Euthamia* connotes "well-crowded," referring to the dense arrangement of flowers on the flat-topped inflorescences.

Goldenrods, as members of the composite family (Asteraceae), have relatively small flower heads (capitula) of both ray flowers (which have pistillate or female only) and disk flowers (with both staminate (male) and pistil) borne in groups on flowering stems called inflorescences. Ray and disc flowers develop from a base or receptacle that is enclosed beneath the receptacle with an involucre, a cup of leafy bracts (phyllaries) or modified leaves. The five petals of both ray and disc flowers are fused together. The sepals are modified into pappi, which are straight hairs that may have small barbs. The fruits are dry: fruits called cypselae that are cone to cylindrical in shape. The pappi are attached to the upper end of the fruits that assist in wind dispersal. The inflorescences are typically club, wand, plume-shaped, or elm-branched shaped. The leaves are always alternate with parallel or netted veins depending on the species. The shape of the inflorescence, as well as leaf shapes and venation patterns, are used to identify species. Even expert botanists sometimes have difficulty in identifying individual species since species often hybridize. All species are perennials and many have rhizomes.

Goldenrods have an undeserved notoriety for causing allergies. Their pollen grains are relatively large, heavier than air, because they are designed to be carried off by flies, bees, and butterflies, but not by the wind. Wind-pollinated plants usually have un-showy flowers and very light weight pollen in extreme abundance. It is the wind-pollinated plants such as ragweed, grasses, sedges, wormwoods, oaks, pines, and many other large trees that cause hay fever. The ecological relationships between goldenrods and animals are fascinating as pollen and nectar sources for insects, stem and leaf tissue eaten by insects and other animals, and the stem tissue as sites for certain insects to lay eggs to develop inside swollen stem tissue that form galls.

The leaves of some goldenrod species have been dried and used as teas or infusions to treat urinary tract problems such as kidney stones and as a diuretic. Various preparations have been used as an anti-inflammatory agent, as an astringent as well as to soothe skin problems, and to stop hemorrhaging. Sweet goldenrod (*S. odora*), a species found in western part of our area, is used as a popular, slightly anise-flavored tea. Called "Liberty Tea" in American Revolutionary times, it was used to replace the heavily taxed British tea. Another popular goldenrod tea is "Blue Mountain Time," used as a pick-me-up. It is claimed that these teas can be used to treat hay fever, sore throats, coughs, and colds. Leaves of some species can be cooked and eaten as greens. Other uses of goldenrod include the dried inflorescences in fall flower arrangements, as a dye source (especially from gray goldenrod, *S. nemoralis*), and as handsome additions to wild and cultivated gardens. Thomas Edison even tried to extract rubber from goldenrod plants to replace rubber from foreign countries during times of war but this never was a commercial success. Some web sources are listed at the end of this article that will give you more information on these uses.

As you enjoy the last displays of late-summer and early-autumn color, try to appreciate the variety and beauty of goldenrods. Let's clear the name of this lovely genus that can add so much color to the late

season flowering landscape or to your own wildflower garden.

Below are some suggested sites for further reading:

Medicinal uses:

http://www.umm.edu/altmed/articles/goldenrod-000251.htm
*www.nathanielwhitmore.com/uploads/6/6/2/3/.../**goldenrod**.doc*

Use as dyes:

http://vikland.tripod.com/goldenrod.html
http://www.5orangepotatoes.com/blog/2009/10/06/natural-dyes-walnuts-and-goldenrod/

Edible uses:

http://www.luminearth.com/2010/10/22/goldenrod-solidago-luminearths-how-to-identify-wild-edible-medicinal-plants/

Edison's extraction of rubber from goldenrod:

http://voices.yahoo.com/thomas-edison-rubber-goldenrod-7070334.html

Taxonomic Changes for Regional Species of Goldenrod By Marion Lobstein

In my last article on modern taxonomic treatments, there was a discussion of how the taxonomy for our native "asters" has been radically altered. Taxonomic changes for our approximately 20 species of goldenrods are much less drastic. Only two of our 20 species have been reassigned from the genus *Solidago* to the genus *Euthamia.* The DNA evidence reveals that these genera are closely related but should be separate.

Linnaeus first applied the genus name *Solidago* in his 1753 *Species Plantarum*. In this work, Linnaeus included several of our native species as well as the European goldenrod *Solidago virgaurea*. In the 1762 edition of Clayton's *Flora Virginica*, three of our native species were included. In 1818, Thomas Nuttall proposed *Euthamia* as a subspecies of *Solidago,* but in 1840 declared it as a distinct species. Asa Gray and John Torrey in 1842 transferred *Euthamia* back to *Solidago*, but by 1876 proposed *Euthamia* as a section of *Solidago*. By 1894, Edward Greene proposed *Euthamia* as a distinct genus. This battle of where to place *Euthamia* went back and forth. Arthur Cronquist, in the 1980 (2nd) edition of *Manual of Vascular Plants of the Northeastern United States and Adjacent Canada,* separated these genera. A strange proposal was made in 1891 by Otto Kuntz, who contended that *Solidago* should be a subgenus of the genus *Aster*. Kuntz proposed to radically reorganize the taxonomy of Linnaeus, but his ideas were not widely accepted in the botanical community. It is ironic that recent molecular DNA studies have shown native asters to be more closely related to *Solidago* (goldenrods) and *Erigeron* (daisy fleabanes) species than the Eurasian asters!

There are some closely related genera to *Solidago* and *Euthamia* that are not in our area but are native to other parts of the U.S. If you would like more information on these genera, check out the "History of this Group" section of the Master's thesis by Jessica Creech on various genera of goldenrods. *Links to this source plus more web articles are available in the online version of this article at* http://pwws.vnps.org,*under "Botanizing with Marion."*

Below is a list of our regional species of goldenrods with name changes:

Solidago altissima (tall) -Tall goldenrod
S. arguta (sharp-tooth) -Cutleaf goldenrod
S. bicolor (two colors) –Silverrod
S. caesia (light blue) -Blue-stem or wreath goldenrod
S. curtisii (named for M.A. Curtis) -Curtis' goldenrod
S. erecta (erect) -Slender goldenrod
S. flexicaulis (bent stem) -Zigzag goldenrod
S. gigantea (giant) -Late goldenrod
***S. graminifolia* (grass-leaved) [now *Euthamia graminifolia* -Grass-leaved goldenrod]**
S. harrisii (named for Harris) -Shale-barren goldenrod
S. hispida (hairy) -Hairy goldenrod
S. juncea (rush-like) -Early goldenrod
S. nemoralis (from the woods) -Old field goldenrod
S. odora (having a smell) -Anise Scented Goldenrod
S. puberula (softly hairy or downy)-Downy goldenrod
S. racemosa (flowers borne in a raceme) -Riverbank goldenrod
S. randii (named for Rand) -Rand's goldenrod
S. rigida (hard) -Hard-leaved goldenrod
S.roanensis (from Roan Mountain) -Mountain goldenrod
S. rugosa (rough) -Wrinkled-leaf goldenleaf
S. rupestris (living beside rocks) -rock goldenrod
S. speciosa (showy) -Showy goldenrod
S. squarrosa (infloresence at near 90 degree angle) -Stout goldenrod
***S. tenuifolia* (narrow leaved) [now *Euthamia caroliniana*] -Fragrant or narrow-leaved goldenrod**
S. ulmifolia (elm-leaved) -Elm-leaved goldenrod

Connect with PWWS!

For a current list of the PWWS board members and their contact information, see *http://pwws.vnps.org.* Also, visit our Facebook page and leave us a message! It's easy—just go to Facebook.com and enter "Prince William Wildflower Society," *or* click on the link from our web site home page.

[**Images**: Deer, from "The Super Plants – Hardy Natives that Tolerate Deer and Shade," accessed at *www.lindenlandgroup.com*; Lance-leaved goldenrod [*Euthamia graminifolia*], Montréal Biodôme, accessed at *www2.ville.montreal.qc.ca*; *Solidago caesia,* image source unknown. **Photos:** Autumn leaves, Deanna LaValle High; Buck Moth, all courtesy of Nicky Staunton; *Solidago sempervirens,* Norman G. Flaigg, NPIN Image Id 16031, accessed at *www.wildflower.org*; *Solidago caesia*, *Solidago rugosa*, Mrs. W.D. Bransford, NPIN Image Id 11334, accessed at *www.wildflower.org*; *Solidago rugosa* 'Fireworks,' Deanna LaValle High, Manassas garden, October 2011.]

EVENTS

Thursday, November 29, 8:30 to 4:00 p.m. Virginia Invasive Plant Symposium. Middleburg Community Center, Middleburg, Va. Join the Piedmont Environmental Council (PEC) and partners for a day-long symposium on invasive plants in Virginia. Hear presentations on new invasives, deer management, contractor perspectives, and more. Scientific experts and farmers will speak, with Dr. Doug Tallamy, author of *Bringing Nature Home*, as keynote. General registration is $25 (includes lunch), $15 for Nursery employees, $10 for students. For more information contact James Barnes: *jbarnes@pecva.org*.

Sunday, December 23, beginning at 7:00 a.m. Nokesville Christmas Bird Count, Merrimac Farm, Nokesville, Va. For more than 100 years, citizen scientists throughout the U.S. have volunteered their time to count birds for the Christmas Bird Count, a national event led by the Audubon Society. Their efforts provide important information about wintering bird populations, distribution, and changes over time. Volunteer birders (including beginners) join a team that covers a portion of the total count area. Read more about the Nokesville Christmas Bird Count, including species observed by year, at *http://pwconserve.org/wildlife/christmasbirdcount/index.html*. As a volunteer, there are 3 ways to help: (1) Identify and count birds in the field, beginning birders welcome; (2) Identify and count birds in your backyard; (3) Make some chili, corn bread, or dessert and/or help serve to cold, hungry birders at the Merrimac Stone House, beginning at 11:00 am. **Registration is required, please call** (703) 499-4954 or email ***alliance@pwconserve.org***

Sunday, November 25, 8:00 a.m., Bird Walk at Merrimac Farm with Harry Glasgow. Meet at the Stone House, 15020 Deepwood Lane, Nokesville. The bird walk is scheduled for the last Sunday of each month.

NATIVES FOR THE GARDEN

BY NANCY ARRINGTON

Goldenrods (*Solidago spp.)*

If you've considered goldenrods just common roadside and field flowers or suitable only for a wildflower meadow, take another look! Many species make attractive perennial additions to the wildflower garden or cultivated border, becoming even more beautiful in the garden than in the wild. Goldenrods are normally thought of as sun lovers, but most will bloom with half a day of sun, and some of the more delicate species are woodland natives. Their golden color and various shapes combine well with the late summer and early autumn blues and purples of asters, lobelias, blazing stars, ironweed, and mistflower.

Plants can be started from seed, though some variations can be expected because of natural hybridizing. Seeds of most *Solidago* species need a cold period in order to germinate and can be sowed outdoors in the fall or stored in the refrigerator for spring sowing. Mature plants can be divided after blooming or in very early spring. Seeds and plants are available from wildflower nurseries.

To prevent unwanted seedlings, cut off flowering heads before they go to seed. Plants that spread from the roots can be contained by planting in a bottomless container that has been sunk into the ground.

The following species, found naturally in our area, are recommended by wildflower garden writers.

***Solidago bicolor*, Silverrod**—the only white species; delicate cylindrical plant under 2′ tall; takes considerable shade.

***S. caesia*, Blue-stemmed or Wreath Goldenrod**—well-spaced flower tufts in the axils of the smooth slender leaves; bluish or purplish wiry stem, which often arches into a graceful wreath-like shape; 1 to 3′ tall; a species of woodlands and damp barrens.

***S. erecta*, Erect or Slender Goldenrod**—slender, wandlike inflorescence similar to liatris; 1 to 4′ tall; dry soils, woodlands.

***S. graminifolia* [now *Euthamia graminifolia*] Grass-leaved Goldenrod**—willowlike leaves with flat open inflorescence; 2 to 4′ tall; good for naturalizing in moist, open meadows with Joe-pye, swamp milkweed, and ironweed; spreads by roots, but can be contained by planting in a bottomless container.

***S. nemoralis*, Old Field Goldenrod**—so named because it is often found in abandoned fields; one of the commonest but also one of the most delicate and pretty; around 2′ tall with attractive blue-grey foliage and lemon or primrose-yellow flowers.

***S. rugosa,* Rough-leaved Goldenrod**—"our most exciting goldenrod," says the North Carolina Botanical Garden; 1 to 7′ tall; arching sprays of bright yellow flowers, tolerant of poor, dry soils.

The following species, occurring in Virginia but not in our area, are also highly recommended for cultivation:

***S. puberula,* Downy Goldenrod**—similar to *S. bicolor* but with very large, deep golden individual flowers; stem is often purplish; 1 to 3′ tall; dry sandy or sterile soils, barrens; *Atlas of the Virginia Flora* shows it occurring in mountain and coastal counties.

***S. rigida,* Prairie Goldenrod**—flat-topped flower heads of rich golden yellow atop sturdy stems; 3 to 4′ tall; showy plant for large sunny border; good for later color as flowers remain pretty even after frost has damaged the leaves; scattered locations in mountainous counties.

***S. sempervirens,* Seaside Goldenrod**—"should be in every sunny wild garden"—Taylor & Hamblin, *Wildflower Cultivation*; deep yellow, flattened flower head, 2 to 6 ′ tall; good choice for rear of perennial border or for naturalizing on dry sunny banks; pinch flower stalks in July and August for bushier plants; a coastal species.

***S. stricta,* Wandlike Goldenrod**—narrow leaved with a tall cylindrical spike of very showy flowers; 2 to 7′ tall, sandy woods, pine barrens; a coastal species.

***S. squarrosa,* Stout Goldenrod**—according to Taylor and Hamblin, "a beautiful goldenrod, it truly is a rod of gold…most showy of the woodland species;" 1 ½ to 5′ tall; individual flowers are large; dry or rocky woodland openings, edges, thickets; a mountain species in Virginia.

PRINCE WILLIAM WILDFLOWER SOCIETY

A Chapter of the Virginia Native Plant Society

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

Next Meeting: The Chesapeake Bay and Its Watersheds, with Jeff Overton

Monday, November 19, 7:30 p.m.

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