In Season with MGPW

the quarterly of the Master Gardeners Prince William

Fall 2020

blue mistflower (*Conoclinium coelestinum*)
photo by Jason Alexander

Fall

PRESIDENT'S MESSAGE

I hope everybody is staying safe and reaching out to friends and family in ways that work for you. We have become zoom experts at our house and actually see our family more now than before the pandemic. Still not the same as in person but better than nothing.

Believe it or not, it is time to start thinking about board officer positions again. We need a president, treasurer and chair for fundraising. These are important positions in the organization, and I very much want to encourage folks to consider these positions. If you have any interest, please reach out to me or any other board member to talk about what it is like to be on the board and the particulars of each position. Also, consider attending a board meeting as a visitor. We meet by zoom so it is very easy to attend from your living room. Again, just let me or any board member know, and we will make sure you are included in the invite for the meeting. We will meet at 6 p.m. by zoom the second Wednesday in November and January before the recertification meeting in March.

Also, I want to encourage you to use AmazonSmile as your entry to Amazon in order to donate a small portion of each purchase to the MGPW organization. I have donated $30.38 in the last year to the organization by using the AmazonSmile link on the Amazon website. It costs you nothing and once you set it up, it is easy to use. Go to Amazon, search for AmazonSmile, and go to the page. We are listed as *Master Gardeners of Prince William Inc.* Select us and you are good to go. I saved the link as a favorite at the top of my web login page rather than the general Amazon page, so I can return each time without looking up our name. Works like a charm and costs nothing. We use Amazon a lot and $30 is not much, but if a good number of members signed up, it would, over time, amount to real money for the organization. Please consider doing this.

Hope everyone is wearing a mask and social distancing. Please feel free to reach out with any questions or concerns.

David
-David Robison, President, MGPW, President@MGPW.org

VMGA REPRESENTATIVE'S UPDATE

by Jeanne Lamczyk

Hi Everyone,

As you may know, I am the VMGA (Virginia Master Gardeners Association) representative for MGPW (Master Gardeners Prince William). A meeting was held via Zoom on August 8, 2020. There are many things that were discussed during this meeting that pertain to all of the units in the Commonwealth.

For those of you who registered for Master Gardener College, you still have access to all of the presentations until the end of December 2020. If you registered by the August 31st deadline, you can still access Master Gardener College information by signing in just like you did for college (use link: https://login.vt.edu/profile/cas/login?execution=e2s1)

Currently, the VMGA Education Committee is working to offer funds to support continuing education projects for any (*continued p. 5*)

INSIDE THIS ISSUE

TOPICS OF INTEREST

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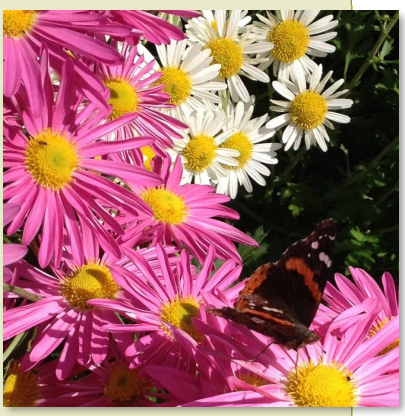
LAWN CARE FOR PWC

Virginia is part of a transition zone between areas where cool and warm season grasses thrive. This can make lawn care in our area challenging. If you're a first time homeowner, new to Prince William County or just looking to better manage your lawn, Virginia Cooperative Extension can help.

We offer help with interpreting soil test results, information on cultural practices, pest identification and pest control recommendations.

For more assistance with lawn care, contact the Virginia Cooperative Extension Environmental Educator at 703-792-4037 or BESTlawns@pwcgov.org.

The BEST Lawn Program can sample and measure your lawn for you and provide you with a fertilizer schedule that will help promote a healthy lawn.



asters at the Teaching Garden with a visitor
photo by Maria Stewart

LAWN: FALL CARE

excerpted from Fall Lawn Care, Virginia Cooperative Extension pub. 430-520

The first step toward correcting an existing problem lawn or establishing new turf is to test your soil.

For Cool Season Grass (tall fescue, Kentucky bluegrass, fine leaf fescues, and perennial ryegrass)

- Late summer to mid-fall is the best time to establish cool-season turfgrass. Warm days and cool nights provide ideal conditions for seed germination and establishment.
- When seeding in late summer or fall, the major weed problems consist of annual bluegrass and winter annual broadleaf weeds. By promoting a rapid establishment of seeded turfgrass, you can avoid most weed pitfalls.
- Diseases and insects are typically of limited importance during the fall. A contributing factor to some fall diseases is an excessive thatch layer, especially on a grass with a lot of stems like Kentucky bluegrass

For Warm Season Grass
(bermudagrass and zoysiagrass)

- Warm-season turfgrasses will go dormant after the first killing frost.
- There are more pre-emergence weed-control options for dormant, non-overseeded warm-season turfgrasses than for cool-season turf because warm-season grasses should not be planted in the fall (unless one is installing sod in early to mid-fall).
- Fall is too late in the growing season to safely aerify or vertical mow warm-season turfgrasses. ◇◇◇

PRIZED PLANTS: ARE MUMS HUMDRUM?

by Maria Stewart, Master Gardener Volunteer

If your answer is "yes," then try asters. Asters come in a wide range of colors and sizes; from red and pink to purple, lavender, and white, and from six inches to eight feet high. They are perennials and like to be planted in rich, well-drained soil, in full sun. Be sure not to overcrowd them to increase air circulation and reduce the chances of powdery mildew. Deadheading spent blooms prolongs bloom time, and pinching back by about a third in mid-summer encourages branching for a fuller, less leggy shape.

Butterflies and other pollinators love asters since they provide much needed food in the fall. For an even greater visual, and pollinator-friendly impact, combine asters with other fall blooming plants such as coneflower (*Echinacea*), goldenrod (*Solidago*), Joe-Pye weed (*Eutrochium purpureum*), and ornamental grasses such as little bluestem (*Schizachyrium scoparium*) for texture. ◇◇◇

saffron crocus emerging
photo by Maria Stewart

saffron crocus in bloom
from Renee's Garden

GARDEN TO TABLE: SAFFRON CROCUS (*CROCUS SATIVUS*)

by Maria Stewart, Master Gardener Volunteer

Saffron is commonly known as one of the most expensive spices. And little wonder—it takes hundreds of these diminutive blooms to have enough saffron for the commercial trade. So, when I saw an advertisement for saffron crocus bulbs from Renee's Garden ("The Garden to Table Seed Company")*, I was intrigued. I had always assumed a spice so expensive must also be difficult to grow. Or, at least, it must require growing conditions not found in Virginia.

I was delighted to learn that saffron crocus is hardy in USDA zones 5-9. Perfect! Prince William County is in zone 7. But, I thought, I must surely be missing something—special fertilizers, a sensitivity to disease or pests? Nope! Renee's Garden promises that saffron bulbs "are easily grown in the garden or containers." I was sold.

I ordered my bulbs, and waited. The bulbs were scheduled to arrive at the end of August, beginning of September for a fall planting which eliminated the uncertainty of when to plant. I was feeling hopeful, and also excited at having blooms for the fall. Saffron crocus is expected to flower in the cold, able to withstand a light first frost, then go dormant during the spring and summer, returning again in the fall.

The bulbs arrived right on time. Clear, easy to follow planting instructions were included along with added information about harvesting, and how to use saffron. Since we live in a woodland setting (with many critter neighbors), I decided to plant my bulbs in a container, inside a fenced area. I popped them in and started looking up ways to use saffron. It's widely used for cooking in England, India, the Middle East, Scandinavia, and the Mediterranean. An abundance of possibilities to explore.

The growing instructions said that the bulbs should sprout 5-8 weeks after planting, and they did not disappoint. By week 5, tiny translucent tubes began to emerge, followed by delicate grassy sprouts. Could blooms for the fall be far behind? I hope not.

I'm now cautiously optimistic about claiming success at my first attempt to plant and grow saffron (or any bulb for that matter). I'm daring to plan for successive years where they are supposed to increase in size and number, so much so that I will eventually have to move some to prevent overcrowding in their current location. I can plant them in more containers on our patio for added fall color, and flavor to our cooking.

**Saffron crocus and other bulbs are also available from Brent and Becky's Bloomin' Bucks. Follow the link and select "Master Gardeners Prince William Inc." to support MGPW: http://www.bloominbucks.com/ Thank you! ◇◇◇*

RECIPE: PAELLA

Ingredients:

1 1-lb. pkg chicken drumsticks

1 1-lb. pkg chicken thighs

¼ cup olive oil

½ tsp. oregano ¼ tsp. black pepper

½ tsp. salt

½ cup chopped onion

½ cup chopped green pepper

1 4-oz. jar pimiento, cut into narrow strips (or a cup sweet red pepper strips)

1 clove garlic, minced

2 cups long-grain white rice, uncooked

1 1-lb. 4-oz can tomatoes (or 1-lb. chopped fresh tomatoes)

1 8-oz. can clam broth

1 16-oz. can chicken broth

4-oz piece of chorizo sausage, thinly sliced (or pepperoni, which has less fat, but not as authentic)

1 lb. shelled jumbo shrimp

1 10-oz. pkg. frozen peas

1 large pinch saffron (about ¼ tsp.)

Preparation:

Season chicken pieces with oregano, pepper and salt. Heat olive oil in a large pan with a cover. Brown chicken pieces all over, remove and set aside. Pour off all but two tablespoons oil in pan. Add onion, green pepper, garlic and pimiento. Cook until soft, but not browned. Add rice, and stir to coat evenly with oil. Add tomatoes, clam broth, chicken broth, browned chicken, sliced sausage, and saffron. Bring to a boil. Cover, lower heat, and cook approximately 15 minutes.

In the meantime, devein the shrimp, and simmer in slightly salted water for 10 to 12 minutes. Defrost the frozen peas. Add shrimp and peas to the large cooking pan, and continue cooking until peas are tender (about 10 minutes).

Makes 10 to 12 servings.

source:
Washington State University, Benton County Extension

MASTER GARDENERS PRINCE WILLIAM TEACHING GARDEN

The Teaching Garden is a project of the Master Gardener Volunteers. It began as a garden to grow fresh produce for the Plant a Row for the Hungry project and a place where Master Gardeners could teach homeowners how to grow vegetables. The Teaching Garden displays low maintenance gardening techniques that homeowners can implement in their own gardens. It also features plant material that grows well locally.

View the Teaching Garden Brochure which contains a map of the teaching garden bed layout. View the upcoming events at the Garden here as well as other horticulture classes offered by the Master Gardeners.

Stay Up-to-Date on the latest from the Teaching Garden!

The Teaching Garden blog

photo by Lynne Lanier Master Gardener Volunteer

OUT AND ABOUT:

ROYAL BOTANIC GARDENS, KEW

by Jamie Nick, Master Gardener Volunteer

Sit down, relax with your favorite beverage, and explore Royal Botanic Gardens, Kew...

From a royal palace to today's globally renowned scientific institution for plant and fungal research, Kew offers virtual tours of their Temperate House, Palm, House, The Tropical Nursery, and more!

click here and enjoy

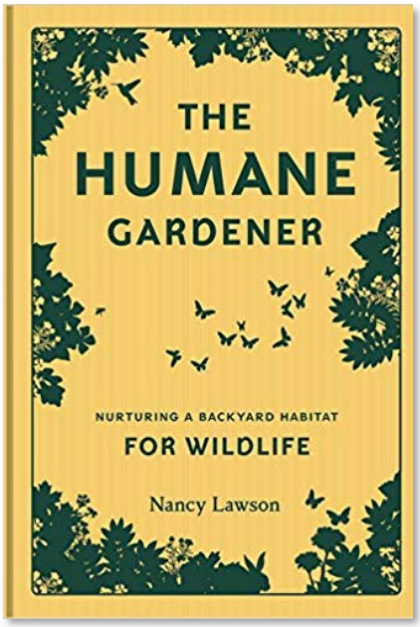
"...allow nature to guide your landscape into peaceful and easier to manage, co-existence."

BOOK NOOK:

THE HUMANE GARDENER BY NANCY LAWSON

by Maria Stewart, Master Gardener Volunteer

Is nature out to get us? Can an animal who's been around longer than humans be an intruder?



Nancy Lawson in her book, *The Humane Gardener: Nurturing a Backyard Habitat*, invites us, through common sense and knowledge, to lay down our arms against our native plants and wildlife. Put aside herbicides, pesticides, mowers and whackers, and allow nature to guide your landscape into peaceful and easier to manage, co-existence.

Lawson encourages us not to fall for the myth that nature is the enemy. She engages the reader with real-life stories of humane gardeners across the United States, the steps they've taken to host native critter neighbors in their landscape, and the resulting benefits to nature and human. She explains how animals, like the often misunderstood opossum and even skunk, can benefit our gardens.

She shares wonderful photographs showcasing how beautiful native plants, and the wildlife they support, can be. She also provides resources so that you too, can become a humane gardener. ◇◇◇

a hedgerow at home
Hedgerows for the Home Garden; Penn State Extension, https://extension.psu.edu/hedgerows-for-the-home-garden

INSIGHTS:

HEDGEROWS—HISTORY AND BENEFITS

by Abbie & Vincent Panettiere, Master Gardener Volunteers

Back in February, I read a New Yorker issue that stuck in my imagination. It was titled "Betting the Farm." It recounted a view concerning the need to feed an ever-increasing population of hungry humans, particularly in England. The gentleman being profiled in this article was Jake Fiennes, who is presently the conservation manager of the Holkham estate, a piece of property that covers some 25,000 acres. Jake Fiennes comes from a well-known family. He has two brothers who are actors. He's the twin brother of Joseph Fiennes, best known playing the character of Will Shakespeare in the movie Shakespeare in Love and he's the younger brother of Ralph Fiennes, frighteningly remembered as Lord Voldemort in the *Harry Potter* film series.

But unlike his two thespian brothers, Jake Fiennes' particular interest is in a very different world: the hedgerows in Britain. A hedgerow, a row of shrubs or trees enclosing or separating fields, is highly valued because in addition to fixing the borders of a field, it provides multiple benefits such as food and safe places to live for birds, insects and plant life, preserves the DNA of plants that might not ordinarily be considered worth protecting, sequesters carbon, and provides wood for many uses. Also, for some hedgerows, where specific trees, bushes, or vines are planted, provide nuts and fruits in season.

However, according to the author of the article, Sam Knight, "An estimated two hundred and fifty miles of the nation's (Britain's) hedges – about a third of the total – were destroyed in the second half of the twentieth century." The cause, he explains, was that after the Second World War, Britain, as well as many countries in Europe, was determined to find ways to end hunger once and for all. In a research technology-based initiative called the "Green Revolution," farming was subsidized and chemicals, heavy farming machinery and crop science were used, which tripled the yields of wheat, oats and barley. Unfortunately, hedgerows were seen as occupying space that might, with the use of heavy

VMGA REPRESENTATIVE'S UPDATE

(*continued from p. 1)*

unit requesting help with payment to speakers. VMGA currently has a list of 81 speakers who are willing to travel, when it is safe to do so, to present a program. This information has been forwarded to our MGPW Education Committee Chair, Jamie Nick. If you have any ideas or speakers that you would like to do a presentation, please let Jamie, Laurie Redfern, or myself know.

The Chair of the VMGA Membership Committee will be sending out a list of VMGA members who belong to each unit. I will be contacting those Master Gardeners to update their information and encourage those who need to, to re-register their membership. It is $12 per year or $120 for a life-time membership. Membership fees help support the endowment for the Master Gardener Chair at Virginia Tech.

Virginia Tech is looking into changes to the by-laws concerning how to move forward with using Zoom for unit and VMGA meetings. That information will be passed along as soon as possible.

Kathleen Reed, Master Gardener Co-coordinator, suggested that VMGA be added as co-host to any on-line programs or presentations. Including VMGA as a co-host will allow program information to be added to the VMGA distribution list making each unit more visible online.

Peggy Fox is the VMGA newsletter editor. If you have an article that you would like to submit to the VMGA newsletter, please send it along to Peggy at peggyfox@hotmail.com or newsletter@vmga.net. It's a great way to show off your writing skills.

That's all for now, please consider joining VMGA. If you go to the Virginia Tech website and type in "Master Gardener" you will find a wealth of information on classes, webinars, and can sign up to receive updates and the VMGA newsletter.

-Jeanne Lamczyk
jeanne.lamczyk@yahoo.com
text 703-623-1110

Insights: Hedgerows

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Matthew Wilson June 13 2014

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The Royal Society for the Protection of Birds (RSPB)
"A History of Hedgerows"

machinery to allow large-scale sowing and harvesting, provide more space per field for planting. For this reason, hedgerows were destroyed and fences put in, increasing the usable size of each field. In the 1950s, in some locations, surplus TNT from World War II was used to blow up the trees and hedges when dismantling a hedgerow.

What was most of interest to me was the hedgerow itself, its history, purposes and, in a lucky search, several sets of instructions for constructing a hedgerow in different climates and territories. I was surprised to find how important hedgerows can be in this era of great climate change, as evidenced by the disappearance of local wildlife, birds, insects, and plants because of the loss of habitat when hedgerows are destroyed.

The British, with their love of hedgerows, have provided a great deal of interesting information. Hedgerows originally would likely have developed as farmers cleared fields to plant or to allow livestock to graze. Trees at the edges of the fields would gradually be joined by thorny hedges and vines which would, after a while, keep deer or other unwanted animals out of the fields and keep the farmers' stock in the fields and crops safe from hungry wildlife. Hedgerows would also have formed naturally at the edges of fields in areas unusable for plowing, in ditches or at the edges of ponds or streams. At the same time, these informal hedgerows would serve as safe places for small wildlife to make a home or escape from larger predators.

There is some evidence to show that hedgerows may date to the Bronze Age (the last changes made to Stonehenge were made during the early Bronze Age, around 1500 BCE, for context). Pierce Conservation District of Britain, in "Hedgerow How-To" mentions that "Judith's Hedge in Great Britain was planted by a niece of William the Conqueror in the latter half of the 11th century." In Britain, from the 17th century until the First World War, hedgerows became a method for the gentry in England to enclose and make unavailable areas that had been available to commoners to graze their farm animals.

Specialists have even developed a means to calculate the age of older hedgerows. With this method, which is commonly called "Hooper's Rule," you count the number of different species in a 30 yard section of hedge and use the following formula: **Age = (number of species in a 30 yard stretch) x 110 + 30 years**.

And as you might imagine, there's no such thing as a "standard" hedgerow; they generally reflect which growing materials are available naturally for use in the area. Farmers developed methods to manage their hedgerows so that they would serve their desired purposes, keeping livestock and crops separate from unwanted and hungry wildlife. Hedgerows also, while doing that, reduce erosion by providing deep-rooted bushes and trees. They can serve as some protection from flooding, and can reduce the effects of it. Of great importance, they improve air quality, and filter out various forms of air pollution.

In a managed or "laid" hedgerow, a farmer might: use a process called "laying" which means partially cutting and weaving branches together to make a more impenetrable barrier to small wildlife trying to enter a field. A farmer might also trim trees and bushes, cut small trees down to the ground so that they would re-grow as bushes but with long, straight poles that could also be used as fuel or support for vining vegetables, and pollarding, which means cutting trees at a certain height to make them more bushy and also to let in more light for the crops or livestock. A mature hedgerow might be at least six to ten feet in width or ideally, fifteen feet, and would become a sort of linear forest for its inhabitants.

In this country during the 18th, 19th and into the early 20th century, farmers practiced something similar, though not as extensive, as the hedgerow. The fencerows, as they were called, and similar to early hedgerows, were generally the uncleared edges of fields where what was local was apt to grow. After a period of time, it became a working barrier protecting the farmers' fields. In the Midwest during the 19th Century, Osage Orange (*Maclura pomifera*), a thorny tree or shrub native to the south-central United States, was often planted to create such a hedge. The tree would be trimmed back continually to

Insights: Hedgerows

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by The Editors of Encyclopedia Britannica

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Green Revolution
From Wikipedia

form a thorny barrier which was, according to the popular boast, "horse-high, bull-strong, and pig-tight."

All of this changed when barbed wire was invented. The first patents were granted in 1867. A man named Joseph Glidden invented a workable machine for making barbed wire in 1874 which can be considered the time when its use began to become common. By 1890, the open range in the western United States had been mostly supplanted by fenced pastureland.

Barbed wire and other fences were seen as an improvement over hedgerows since they allowed the use of what had been marginal land for farming and development. Big agriculture, in England, Europe, and America, took over, as mentioned above, as it provided larger fields and allowed big machines to increase the size of crops. In aid of big agriculture, the use of fertilizer, pesticides, monoculture, (the planting of large crops of one grain or plant), and the removal of native plants and animals made for more efficient use of the land. In places, it was called "clean farming."

Hedgerows have declined for several reasons beside being blown up or dug up. Farmland lost to development and the building of tracts of houses is a common cause. Also, hedgerows in areas where herbicide and pesticide sprays are in use can be destroyed by spray drift; indiscriminate trimming can weaken and destroy hedgerow trees and bushes; and simple neglect can produce sections of hedgerow with gaps which leave an untidy appearance and make the hedgerow less useful.

In Britain also, Matthew Wilson, in Financial Times June 13, 2014, wrote "The plants within [hedgerows], provide food and shelter for the animals and a safe haven from predators, so when a hedge is removed, the effects are more than aesthetic. The demise of once common bird species [in England] such as the hedge sparrow, linnet and song thrush is at least in part attributable to the decline of hedges. There are bat species, such as the greater horseshoe, that use them to get to their feeding grounds, and when these navigational aids are removed bats can become disorientated and starve to death."

Several sites describe what is needed to create a hedgerow and some give very specific advice. Heather McCargo of the Ecological Landscape Alliance covers the subject of hedges and hedgerows from the angle of what native plants would be needed for various sized areas. She recommends "Small Hedges for Tight Spaces" for small areas such as patios or front yards, then gets into the subject of hedgerows. "The goal is not a uniform look, but instead a diverse planting of at least a dozen species of woody plants, from shrubs to small trees, along with herbaceous ground covers at their base, all chosen with similar demands of soil type, moisture, and sunlight." She provides lists of plants – all of which seem to be varieties native to the United States - recommended for various soil and moisture conditions.

A British site, Pierce Conservation District, in "Hedgerow How-To," gives a history of hedgerow construction and uses, and explains how to design a hedgerow in great detail. They suggest that the hedgerow constructor consider plants for a hedgerow with the following in mind:

> "Be easily kept in bounds
> Be strong enough to resist the efforts of animals
> Choose plants which are suited to soil type
> Consider the longevity and the vigor potential of plants
> Disease resistance
> Inedible and unattractive to livestock within the field
> Produce a stock-proof hedge in a reasonable amount of time
> Produce shoots close to the ground, containing both small and larger animals
> Provide small animals with a place to escape, which is made easier if the hedge has thorns"

The site provides a list of suggested trees and shrubs which also seems to consist of

varieties native to the United States.

Part of my enjoyment of reading the *New Yorker* article about Jake Fiennes was envisioning the estate he managed, a bucolic 25,000 acres! A hedgerow border of ten or so feet wouldn't detract much from its size, whereas for most of us creating such an edge, it would be impossible, or at least, extravagant. But worldwide, there are many places where hedgerows would be quite worthwhile and beneficial. In this time of rapid climate change, and the danger of extinction facing so many of the earth's creatures and plants, a well-constructed hedgerow, besides being a beautiful addition to the territory it covers, may also serve to clean the air, absorb and sequester large amounts of carbon, and also serve to protect and provide living space to wild creatures and plants. ◇◇◇

IN THE COMMUNITY: FOOD WASTE NOT WASTED

Announcement from Nancy Berlin, Natural Resource Specialist/Master Gardener Coordinator

Food waste from the Prince William County Public Schools (PWCS) will be diverted from the Prince William County Landfill to Prince William Solid Waste Division's Balls Ford Road Compost Facility—turning waste from schools into "gardener's gold" while also potentially extending the life of the landfill.

The Prince William Board of County Supervisors received an $88,270.16 grant from U.S. Department of Agriculture's Natural Resources Conservation Service Community Compost and Food Waste Reduction Project to launch the 18-month food waste composting pilot program. Six of the ninety-six schools in the Prince William public schools system will partner with the county's Virginia Cooperative Extension (VCE) to establish best practices for collecting food waste from cafeterias and events.

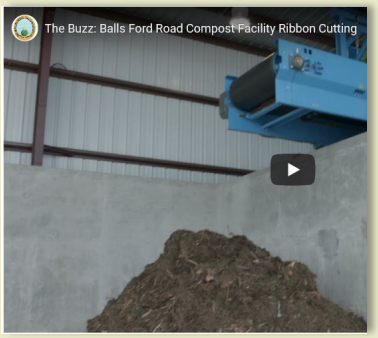
The County Solid Waste Division and PWCS will coordinate collecting and transporting the food waste to the composting facility. Students will be able to use the finished compost at school gardens which will help them learn about ecology and the environmental benefits of compost.

VCE's Nancy Berlin will be training volunteers to support the project. VCE will also work with school staff – training them on what and how to collect. Nancy and volunteers have already toured the schools, and have met with personnel at the Balls Ford Road Facility to learn more about Freestate Farms' advanced aerobic composting system.

Success of the pilot program could mean not only enriching gardens, and student education, but it could also extend the life of the landfill, which is currently scheduled to close in 2065. ◇◇◇

Balls Ford Road Facility,
Composting materials saves precious space at the landfill.

To learn more click here:



Patrick Lucas, Master Gardener Volunteer, meeting at the Balls Ford Road Facility to learn more to help the pilot composting program

photos by Nancy Berlin

Extreme algae blooms in Lake VANSJØ, Norway caused by fertilizer runoff

WATER-WISE:

PROTECTING OUR LAKES AND STREAMS FROM LAWN FERTILIZER RUNOFF

by Larry Lehowicz , Master Gardener Volunteer

There are several scientific studies that address the long-term harm fertilizers can have on a lake's health. For example, there is one study[1] about a lake in Norway where many years of fertilizer runoff contributed to the growth of masses of algae (see photo). Initially, scientists thought that after eliminating the fertilizer's phosphorus source the lake would naturally clean itself in about 20 years. Data over time showed that the problem did not go away and the estimate was increased to 50 years; then to centuries. The phosphorous had permanently changed the lake bottom ecosystem which accelerated the growth and reproduction of toxic algae.

In another study[2] phosphorus was introduced during a controlled experiment to a small lake in Canada. Consequently, the lake water changed from being relatively oxygen rich and low in nutrients to being low in oxygen level and having excess nutrients. The aquatic habitat was badly damaged and remained impaired long after the phosphorous input stopped.

In our area we have a few lines of defense against this type of fertilizer damage to our lakes and streams:

- One line of defense is the natural forested buffer around lakes and streams whose root mass absorbs nitrogen, phosphorous and other fertilizer chemicals in ground water as well as naturally filtering storm water runoff and preventing erosion. This "Resource Protection Area" (the 100-foot space which starts at the shoreline and is measured inland) is protected by a number of federal, state and county laws and regulations. Ideally, **the Resource Protection Area vegetation should remain undisturbed** by property owners so the water that flows into bodies of water has been filtered through native vegetation.
- Another line of defense is residents taking care when we fertilize our lawns. From personal experience, I asked the Virginia Cooperative Extension (VCE) to do a soil test on my lawn which is near Lake Montclair. The results showed that due to my annual fertilizer applications far too much phosphorous had accumulated in my soil – much of which will be dissolved into the ground water and emerge into the lake. Now I only use grass fertilizer with no phosphorous. As we have all been taught, fertilizer chemical composition is shown as three numbers like 24-0-3. The middle number is phosphorus content and unless shown by soil analysis to be required it should be zero. If residents in our communities **eliminated phosphorous in their fertilizer and used fertilizer sparingly,** we would have a positive influence on the health of our lakes and streams.
- From a regional view, some jurisdictions in the District-Maryland-Virginia area have prohibited the use of lawn fertilizers containing phosphorous to protect their water sources.

By adopting these practices, cleaner water will flow out of our area's lakes and streams and ultimately into the Chesapeake Bay to also help resolve regional environmental challenges. Thanks for caring about the quality of our water and our vegetative ecosystems. ◇◇◇

Water-wise: Notes

1. https://www.researchgate.net/publication/337611454_Coupling_Water_Column_and_Sediment_Biogeochemical_Dynamics_Modeling_Internal_Phosphorus_Loading_Climate_Change_Responses_and_Mitigation_Measures_in_Lake_Vansjo_Norway

2. https://eos.org/research-spotlights/the-lasting-legacy-of-phosphorus-buried-in-lakes&utm_campaign=ealert

Early Photo of the Island's More Pristine Natural Forested Buffer

IN THE COMMUNITY:

THREE MONTCLAIR HOMEOWNERS AWARDED VIRGINIA STATE FORESTRY GRANT

by Larry Lehowicz , Master Gardener Volunteer

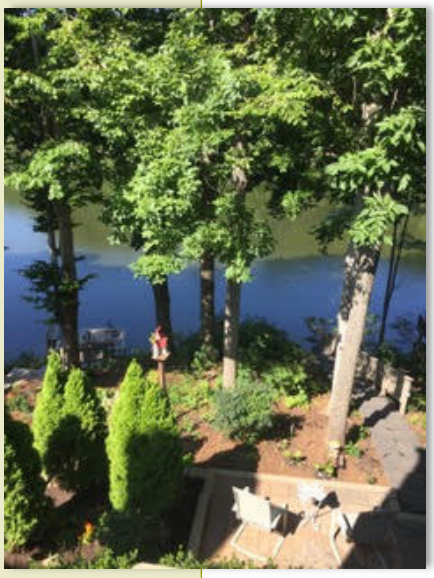
A grant of $1,332 was awarded to three Montclair families as part of the Virginia Department of Forestry (VDOF), 2020 Virginia Trees for Clean Water 50-50 Grant Program.

Fall 2019 Pre-Restoration of One of the Demo Areas

Angela Carroll, Beverly Houston and Ed & Patti Slaughter, assisted by Project Manager Larry Lehowicz, submitted a winning grant proposal to help purchase native trees and woody shrubs to better restore the damaged forested lakeside buffer behind their homes in the Island sub-association. The project is meant to create demonstration areas that show how we can influence cleaner water entering into Lake Montclair.

The native forest behind the three homes had been inadvertently damaged and encroached upon over the past 30+ years. The new vegetation will augment existing natural buffer to 1) Reduce storm water runoff sediment, 2) Absorb chemical nutrients from fertilized lawns, 3) Counter lake shore bank erosion and 4) Provide a better ecoculture in the riparian buffer.

The 1990 Chesapeake Bay Preservation Act designated a 100-foot area adjacent to Lake Montclair's shoreline as part of a regional Resource Protection Area (RPA). The state laws are enforced by Prince William County (PWC). Since the damaged forested buffer behind the three homeowners is in the RPA, they sought professional forestry expertise and approval from VDOF, PWC, Master Gardeners of Prince William and others. Also, since the Island Homeowners Association (IHA) was deeded the common area behind the cluster of homes from the original builder, IHA approval was requested and gratefully received.

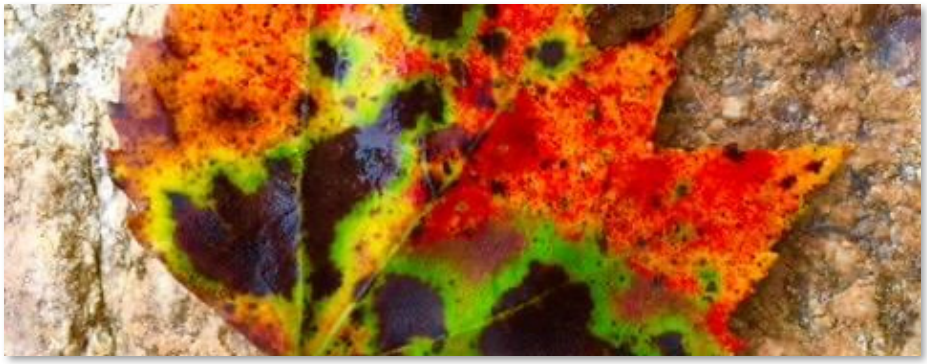


Summer 2020 Post-Restoration of One of the Demo Areas

photos by Larry Lehowicz

The Island's team of RPA "pioneers" provided personal matching funds to the state grant and have participated in briefings to many residents of the Island about the background and fragility of the RPA. Armed with this education it is hoped that other residents will either 1) Visit one or more of the three demonstration areas and consider submitting a grant proposal and get approval to help restore the RPA areas behind their homes or 2) Leave the RPA in a natural and undisturbed condition so our Lake, Powell's Creek, Potomac River and ultimately the Chesapeake Bay will have cleaner water sources for generations to come.

The RPA and demonstration briefings are available, upon request, to be given to others in Montclair or PWC. Contact Larry Lehowicz at llehowicz@gmail.com. ◇◇◇



Maple (*Acer*) Leaf; photo by Jason Alexander

RESEARCH FOCUS: MOWING LEAVES INTO THE LAWN

by Jeff Schneider, Master Gardener Volunteer

With summer winding down and autumn on the way, it's time to start preparing for those fall chores such as the dreaded raking and bagging of those fallen leaves that blanket our yards. But, landfills across the country are getting stricter about yard waste disposal and who wants to spend half of their fall Saturdays raking anyway?

A series of studies conducted by Michigan State, Purdue, and Cornell, among others, concluded that mowing leaves into the lawn is a much better alternative to raking and bagging, not only for disposal, but for the lawn itself. Mowing is now explicitly recommended by most state extension services including Virginia, Maryland, and North Carolina, in our neighborhood. Even Scotts has gotten into the act by recommending that homeowners mow in their leaves (accompanied by a healthy dose of their fertilizer, of course).

But when and how and how much? Based on the research, most extension services have settled on the recommendation that most yards can absorb 150 lbs of leaves per thousand square feet, which is a 6-inch layer of leaves (one inch equals about 25 lbs per thousand square feet) applied in the fall. In one study, researchers mowed the 6-inch layer all at once. The Michigan State Extension says that this can still be done, but Kansas State Extension, among others, suggests that it's better to mow as the leaves come down, and think of the 6-inch layer as a cumulative total. KSE also notes that the more frequent mowing will help pulverize the leaf mulch into smaller particles which will aid decomposition. In my own experience, one pass with a rotary mower over a 1-inch layer of leaves will leave very little residual leaf matter visible on the lawn and that residual generally disappears within a few days.

Early research on this topic was aimed at determining whether mowing was a viable disposal method with little attention devoted to noting any potential benefits to the lawn. In one early study, researchers tried to determine the upper limit of how much leaf litter could be applied and concluded that applications of up to 450 lb per square foot could be applied with no harm to lawns. Although no extension service recommends anything close to this amount, it is nice to know you can overshoot the 150 lb recommendation without too much worry.

More recent research has focused on the effects of the mown leaf litter on the lawn itself. One study found that mowing reduced broadleaf weeds, had no effect on soil pH, increased the organic fraction in the soil, and led to grass plants taking up more nitrogen and carbon without changing their underlying C:N ratio—i.e., the grass plants were more healthy.

The "fertilizer effect" remains an area of debate. Some extension services recommend that

LEAVE THE LEAVES

Leaves provide food and shelter for butterflies, bees, beetles, and many more, including this luna moth (*Actias luna*).

photo by Jason Alexander

adding leaves to the turf should be considered as part of the nitrogen nutrient management program for the lawn. The nitrogen content of deciduous tree leaf litter ranges from 0.5 up to 2.5 percent of the weight of the leaves. So a 150 lb addition could contribute from .75 to 3.75 lb of slow-release nitrogen. Other services disagree noting that the leaf mulch is more likely to draw nitrogen from the soil as it decomposes, before returning it as organic compounds to the soil after decomposition. These services recommend adding as much as 0.5 lb of nitrogen to aid decomposition and replace what the leaves take up. The Virginia Tech article listed below recommends mowing in the leaves without any adjustment to the normal nutrient management guidelines.

So, mow in those leaves this fall. You'll be keeping a valuable resource out of the landfill, improving your lawn, and gaining more free time on those crisp fall Saturday afternoons.

Sources & For More Information

http://www.grounds-mag.com/mag/grounds_maintenance_leaves_turn_litter/
(An excellent overview of the Michigan State studies by one of the research participants)

https://turf.purdue.edu/report/1999/page24.htm
(The executive summary of the Purdue study)

https://pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/430/430-521/430-521_pdf.pdf
(Virginia Tech's recommendation by Mike Goately, Jr)

https://extension.umd.edu/sites/extension.umd.edu/files/_docs/programs/hgic/HGIC_Pubs/lawn_pubs/HG112_Turfgrass_Maintenance_Calendars.pdf
(Maryland Extension's Turfgrass maintenance calendar)

https://www.scotts.com/en-ca/library/lawn-basics/dont-rake-those-leaves-mulch-them-your-lawn
(Scotts Lawn Care Basics)

http://turf.uark.edu/turfhelp/archives/111011%20leaves.html
(A nice treatment of the topic from the University of Arkansas)

http://msue.anr.msu.edu/uploads/files/Mulch_fallen_leavesRS.pdf
(Michigan State remains a strong booster of mowing)

http://www.johnson.k-state.edu/lawn-garden/agent-articles/lawns/mulch-mowing-fall-leaves.html
(Kansas State's take)

https://medium.com/@Aydoptimize/bag-the-rake-not-the-leaves-aa1bf6eb77bc
(Oakland County, MI; Bag the Rake, Not the Leaves) ◇◇◇

Plant NOVA Natives
Naturally Beautiful!

"Plant NOVA Natives is the joint marketing campaign of a grand coalition of non-profit, governmental, and private groups, all working to reverse the decline of native plants and wildlife in Northern Virginia.

Our strategy is to encourage residents as well as public and commercial entities to install native plants as the first step toward creating wildlife habitat and functioning ecosystems on their own properties.

All are welcome to participate in this collective action movement!"

COURTESY OF PLANT NOVA NATIVES: MAKING FRIENDS WITH THE HUMMINGBIRDS

reprinted with encouragement from PLANTNOVANATIVES, August 22, 2020; thanks to Leslie Paulson, Master Gardener Volunteer

Fall is a great time to work on the guest list for next year's garden party. Hummingbirds make some of the best guests of all, or to put it more accurately, we can make ourselves better guests of them by providing what they need around their homes, otherwise known as our yards. Our local Ruby-throated Hummingbirds are migratory, departing Virginia in September for Central America and returning to the place they were born in mid-April. It will not surprise anyone to know that what they need when they arrive back is not sugar water but an intact ecosystem that provides food and shelter for them and their offspring.

It is well known and indeed true that hummingbirds are attracted to bright colors, especially red, so for viewing opportunities, do plant Eastern Red Columbine and Coral Honeysuckle for spring blooms, Scarlet Beebalm for early summer and Cardinal Flower for late summer. It is fun to watch the hummingbirds make the rounds from plant to plant, timing it exactly to when the nectar has had a chance to re-accumulate. All of these plants co-evolved with hummingbirds and have the tubular-shaped red flowers that fit the bill – literally. Hummingbirds have incredible memories and know the location of individual flowers not only around their own homes but

along the thousands of miles of their migration routes. They also recognize humans as individuals, learning to trust you and hovering in front of you when they are wondering when you are going to refill their feeder, if you have been in the habit of providing one.

Although we think of hummingbirds as nectar eaters, the great majority of their diet is made up of insects and spiders. We can provide them with insects by planting native plants. Because most insects can only eat the plants with which they evolved, a yard full of European and Asian plants such as turf grass and Japanese azaleas is largely an empty yard, devoid of food sources not only for hummingbirds but for songbirds in general. The red-flowering plants that were named above are all native to our area, as are hundreds of other garden-worthy plants which are increasingly being planted in our yards as Virginians start to recognize the beauty of our own flora as well as its value for the non-human residents of our properties.

The ideal time to plant is in the fall, which gives the plants a chance to become well established before facing the heat and droughts of summer. To help you plan, the Plant NOVA Natives website has a plant finder function in which you can search specifically for plants that attract hummingbirds. There are also lists of local garden centers that specialize in native plants as well as lists of conventional garden centers where Plant NOVA Natives volunteers are labeling the natives with red stickers. Just for fun, check out our silly one minute video of local hummingbirds and other critters interacting with native plants. And when your neighbors stop by to gawk at the sight of hummingbirds in your yard, you can give them this pamphlet so they can learn about planting natives in their yards to attract hummingbird, too. ◇◇◇

Ruby-throated Hummingbird (*Archilochus colubris*) on Trumpet Honeysuckle (*Loniera sempervirens* f. *sulphurea* 'John Clayton')

Ruby-throated Hummingbird (*Archilochus colubris*) on Scarlet Beebalm (*Monarda didyma*)

photos courtesy of Plant NOVA Natives

CONSERVATION AT HOME: LAWN ALTERNATIVES

by Jason Alexander & Maria Stewart, Master Gardener Volunteers

"Ooooo, what's that?" my husband and I asked each other. After employing our "garden by elimination" strategy (remove what you know you don't want, and see what shows up), we noticed a small, low-growing plant covering the ground in areas with consistently moist soil, in full sun (at least 6 hours of direct sunlight per day) and part shade (shaded for about 4-6 hours). Much to our delight, we discovered that this new groundcover was American water pennywort (*Hydrocotyle americana*), a perennial native to Virginia that grows a couple inches high.

The more we eliminated the undesirable plants trying to smother it, the more the pennywort stretched and filled out, becoming a luxuriant carpet that has been holding up to moderate tread, including tread of the furry, four-legged, canine variety. Our dogs sometimes relieve themselves on the pennywort, also with no ill effects. If we had been maintaining lawn in those spots, our dogs certainly would have burned it out by now.

With other plants fading this time of year, the pennywort continues to be the brightest green in our landscape. After the growing season, we look forward to its return in the spring.

American water pennywort *(Hydrocotyle americana)*

photo by Jason Alexander

...our "garden by elimination" strategy (remove what you know you don't want, and see what shows up)..."

We employed more lawn reduction measures by continuing to expand our meadow areas with colorful plants such as cardinal flower (*Lobelia cardinalis*), brown-eyed Susan (*Rudbeckia triloba*), white yarrow (*Achillea millefolium*) and a variety of goldenrods (*Solidago*). Not only is our landscape becoming more visually interesting, it's a hub of pollinator and insect activity. Thanks to these beautiful native plants, we've come to think of our insect population as bird food. Rather than pests to be squashed, the native plants and the insects they support are welcome additions to our little backyard nature preserve, supporting a stable and healthy food web. ◇◇◇

cardinal flower (*Lobelia cardinalis*), brown-eyed Susan *(Rudbeckia triloba)* and others, replacing lawn for meadow

photo by Jason Alexander

Prince William has a core group of trained Master Gardeners in the Audubon at Home program who have certified over 100 homes. To make more land in Prince William County wildlife-friendly, start to certify your property today. If you are ready to make your backyard or community space more environmentally friendly give us a call at 703-792-7747 or email master_gardener@pwcgov.org.

CRITTER NEIGHBORS:

BANDED TUSSOCK MOTH (*HALYSIDOTA TESSELLARIS*)

by Jason Alexander, Master Gardener Volunteer

The Banded Tussock Moth or Pale Tiger Moth, *Halysidota tessellaris*, is native to North America and can be found from Southern Canada to Texas and Florida. In the larval stage, the caterpillar is covered in distinctive tufts of hair-like setae ranging in color from yellow and orange to grey. Larvae host on a wide variety of plants, including birch, poplar, oak and walnut. As adults, the moth feeds on decaying plants, absorbing alkaloids which offer defensive properties. The adult is a little furry and has an orange and blue stripe on its thorax. It is indistinguishable from the Sycamore Tussock Moth without dissection. However, the Sycamore Tussock is partial to the Sycamore tree from which it gets its name. They take flight from May to August while the caterpillar can be seen in the fall.

Banded Tussock Moth caterpillar

photo by Jason Alexander

Source:

InsectIdentification

https://www.insectidentification.org/insect-description.asp?identification=Banded-Tussock-Moth

Master Gardeners Prince William

Master Gardeners of Prince William (MGPW) is the supportive organization for active Master Gardener Volunteers in Prince William County, Manassas City and Manassas Park. There are approximately 200 active volunteer environmental educators serving in various capacities.

Volunteers and volunteerism are central to the MGPW mission as we strive to make our community a more sustainable, healthy and beautiful place to live and to educate residents about the many benefits of gardening, including the opportunity to grow nutritious, healthy food, environmentally friendly landscapes, all with the ultimate goal of protecting water quality in local waterways and the Chesapeake Bay.

FREE ONLINE CLASSES

Virginia Cooperative Extension (VCE) is hosting classes via zoom Wednesdays, 11:00 a.m. to Noon. For a schedule of classes, click here: Prince William County Cooperative Extension Horticulture Classes.

Please register for classes by contacting the Horticulture Help Desk at mastergardener@pwcgov.org.

All classes as well as Teaching Garden tour videos can be found on our YouTube channel.

Although Prince William County Buildings are closed to the public, VCE staff and Master Gardener Volunteers are working remotely to answer your lawn and garden questions. Please contact us by emailing mastergardener@pwcgov.org or call 703-792-7747.

Master Gardeners Prince William

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*-Send submissions, questions, or comments to **MGPWnewsletter@gmail.com***
The Editors,
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