Nature's Exquisite Timing -- Phenology

Recurring Life Cycle Events in Plants and Animals

Some call it "nature's calendar" -- phenology. On November 18, LoriAnne Barnett from the USA National Phenology Network (www.usanpn.org) will give a presentation to FODM and friends on phenology, nature's timing. "The study of recurring life cycle events in plants and animals is called phenology," says the Network. Some examples:

- Warblers migrate through an area or raise their young when caterpillars emerge and become a major food source.
- Migrating red knots time their stopover in Delaware Bay to fatten up for the next leg of their journey when horseshoe crabs come to the shore and lay eggs.
- Plants pollinated by insects flower when the pollinators are available in the ecosystem.

The Phenology Network encourages people to observe and record events like leaf out, flowering, migrations and egg laying to help researchers better understand how species and ecosystems are responding to global environmental change. Understanding phenology also helps land managers make better decisions.

Barnett coordinates the NPN's education activities and engages people in the Nature's Notebook science program. She holds a B.A. in environmental studies from Shippensburg University in Pennsylvania and a M.A. in environmental science and environmental education from Prescott College in Arizona. She has served as Virginia Cooperative Extension.

FODM Quarterly Meeting
Wednesday, November 18, at 7:30 p.m., Huntley Meadows Park, Norma Hoffman Visitor Center, 3701 Lockheed Blvd., Alexandria, VA 22306. Phone 703-768-2525. Free to all.

Calendar of Events
November 7 -- 10 a.m., Trash Cleanup in Dyke Marsh West. December 19 - Christmas Bird Count, Dyke Marsh; January 3 Mount Vernon area, see p. 7.
2016 Member Meetings: February 28, May 11, September 14 and November 16.

Dyke Marsh Restoration Update

BY ALEXCY ROMERO

There has been some exciting progress in the project to restore the Dyke Marsh Wildlife Preserve. Now that we have reached some milestones, the project should begin to move a bit faster! Officials of the U.S. Army Corps of Engineers (USACE) and the National Park Service (NPS) have signed the interagency agreement and held the kick-off meeting for the project on September 28-29, 2015, at the George Washington Memorial Parkway's Turkey Run headquarters.

NPS and Virginia State Historic Preservation Office officials have signed the programmatic agreement for section

Dyke Marsh is vanishing as erosion continues. Photo by Glenda Booth

MEETING (continued on page 2)

RESTORATION (continued on page 2)
Saving Pumpkin Ash Trees -- An Update

FODM is partnering with the National Park Service (NPS) on a project to try to save some of the preserve’s pumpkin ash trees (Fraxinus profunda) from destruction by the emerald ash borer (EAB) (Agrilus planipennis), as we reported in our last issue. This invasive insect was found in Fairfax County in 2003 and has been documented in Great Falls and Turkey Run Parks. "An EAB infestation is always fatal to ash trees," says the U.S. Department of Agriculture (USDA) website.

Dyke Marsh has over 1,000 pumpkin ash trees. The EAB could kill all of the pumpkin ash trees in Dyke Marsh in 20 years without action. On May 13, 2015, FODM funded the treatment of nine trees. In September, FODM project leader Robert Smith assisted Peter McCallum and Brent Steury of NPS and four North Carolina Botanic Garden staffers (photo, above) who collected over 10,000 pumpkin ash seeds from 25 or more trees in Dyke Marsh for preservation, using, as Robert said, "advanced equipment such as a fitted bottom sheet to hold the seed." This seed will be available to help restore Dyke Marsh and to replace trees expected to be lost to the emerald ash borer.

"It is painful to imagine Dyke Marsh without its expanse of ash trees so we are doing what we can to ensure that they will revive after an attack," Robert said. Dead trees and fewer trees in the marsh would further destabilize Dyke Marsh, NPS officials maintain. For more information on this project, see our website at www.fodm.org.

Marsh Wrens Now on Website

You can now browse through past issues of The Marsh Wren by clicking on the Newsletter link at the top right of our website. The current newsletter is available at the same link, but only to members who have logged in. Get your username and/or reset your password by entering your email address on file. Report any problems to info@fodm.org.

RESTORATION (continued from page 1)

The agreement with Virginia determines responsibilities for the treatment of archaeological resources. We have decided to delay the signing of the ROD until after the value analysis is completed. The value analysis, to help determine the construction plan, is anticipated to be completed in late fall or early winter. We expect the design component of the project to take approximately 12 months.

Alexcy Romero is the Superintendent of the George Washington Memorial Parkway, National Park Service.

MEETING (continued from page 1)

The meeting, at 7:30 p.m., is free and will be at the Huntley Meadows Park Visitor Center. If you use a GPS device, do not enter the park’s name. Enter the address, 3701 Lockheed Boulevard, Alexandria, Virginia 22306.

Friends of Dyke Marsh Board of Directors

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Trudi Hahn ………………………………. 703-683-9009, trudihahn@gmail.com
Jessica Strother ………………………….. 703-309-7201, strotherjessie@yahoo.com
Katherine Wychulis ………………………. kewychulis@aol.com

The Marsh Wren is a quarterly publication of the Friends of Dyke Marsh, Inc., a nonprofit 501(c)(3) organization. Letters and submissions to The Marsh Wren are welcome. Send them to the address above. Board members can also receive mail at this address. Special thanks to Duncan Hobart for managing our website (www.fodm.org).
President’s Message
Glenda C. Booth, President, Friends of Dyke Marsh

Fall migration has been in full swing for awhile. Ed Eder spotted an American golden plover just off Dyke Marsh and in the mudflats just north of the Belle Haven picnic area in early September. Some butterfly and dragonfly species have headed south or passed through. Exquisite little ruby-throated hummingbirds, only three inches long, made epic journeys too. The fall asters and goldenrods of Dyke Marsh help make migration a little easier for many species.

The best news we’ve gotten in a long time is that the U.S. Army Corps of Engineers (COE), under an agreement with the National Park Service (NPS), is now preparing engineering plans to restore Dyke Marsh, a project delayed far too long. We thank the NPS and the COE. Corps officials say it will take a year to complete the plans (see Restoration, page one). These plans cannot come soon enough. The 2010 U.S. Geological Survey study found that the marsh is eroding one and a half to two acres a year on average and that the marsh will be gone in 20 years without action.

2016, the Centennial

Next year, the nation will celebrate the 100th anniversary of the U.S. National Park Service. Getting Dyke Marsh’s restoration underway would be an excellent way to celebrate the NPS centennial.

The centennial hopefully will be a renewed commitment to what filmmaker Ken Burns called "America's best idea." FODMers no doubt agree. While national park visitation has reached record levels in some parks, park funding continues to decline. NPS has seen a 12 percent or $370 million reduction in its budget over the last five years in today’s dollars and faces a $11.5 billion maintenance backlog.

Americans support national parks. President Obama has sent to Congress the National Park Service Centennial Act, a bill to establish a dedicated fund of $100 million each year for three years to be matched with private contributions from individuals, foundations or businesses. The intention is to augment, not replace, annual Congressional appropriations to restore our parks for the next 100 years. Advocates of this approach argue this that will generate more funds, create partnerships and support more NPS activities and facilities. Also, every dollar invested in park operations generates about $10 for local economies, maintains the National Park Conservation Association. Of course, our parks have value beyond economics. By the way, the George Washington Memorial Parkway is the fourth most visited park in the nation.

Congress can and should provide the resources to restore and protect our country’s most treasured natural, historical and cultural sites. That includes Dyke Marsh, a wildlife preserve that Congress added to the national park system in 1959 "so that fish and wildlife development and their preservation as wetland wildlife habitat shall be paramount."

Our Volunteer "Army"
The Friends of Dyke Marsh has an "army" of dedicated volunteers who conduct surveys, lead walks, whack invasive plants and more. On October 11, 29 members of local Daughters of the American Revolution chapters collected 59 bags of trash and tackled invasive plants. FODMer Robert Smith wrote on Facebook, "The DAR turned out in force today to help in Dyke Marsh. Under Ned Stone’s direction they split into three groups and cleaned the shores of an island and the picnic area and beat back invasive plants on the dog-leg portion of the trail. It makes a difference."

Everyone makes a difference. Virginia Lieutenant Governor Ralph Northam wrote us on September 16: "I want to thank you and everyone at your organization for working tirelessly to preserve and restore Dyke Marsh. . . I agree that Dyke Marsh is a special place that we must work to preserve."
The Other Dyke Marsh -- Dyke Marsh West

BY GLENDA BOOTH

A natural jewel lies just west of the George Washington Memorial Parkway where water flows west under the road - ~26 acres of the Dyke Marsh Wildlife Preserve. Around 20 of these acres are tidal wetland and little disturbed, at least by people. Dyke Marsh West stretches from the parkway on the east; between homes on Wake Forest Drive on the south; behind Belle View and River Towers Condominiums on the north; and to a woodland next to the River Towers' picnic grove and gardens on the west.

Dyke Marsh West is home to wood ducks, beavers, frogs, dragonflies, great blue herons, pickerelweed, spatterdock and more. Beavers have built a dam there.

Unfortunately for people, but probably fortunate for critters and habitat quality, this part of Dyke Marsh is not easily accessed. You can see it from the parkway and a few have canoed into part of it at high tide. You can also see it from the backyard of the River Towers Condominiums, but River Towers is private property. Non-residents should not go there without an invitation by a condo resident.

In the last year or so, the Friends of Dyke Marsh have focused more attention this special part of the marsh:

**Dyke Marsh Turned Orange**

Last year, FODMers in River Towers observed and photographed huge volumes of orange-brown, mucky sediment flowing into Dyke Marsh from the west during storms. Dyke Marsh turned orange.

FODM convened a meeting of county and National Park Service officials, which eventually resulted in the county initiating a project upstream, called the Quander Road outfall restoration. Basically, there's an 18-inch pipe on the western, upland end of Mount Vernon Park, that sends stormwater downhill through Mount Vernon Park, under Fort Hunt Road and into Dyke Marsh. Around 9.6 acres drain from the Bucknell subdivision into the pipe and out into Mount Vernon Park. The intensity and volume of the stormwater raging downhill over highly-erodible soils has sliced off huge "slugs" of soil. County officials say that the highly-eroded channel is 13 feet deep, more than 50 feet wide and 200 feet long. Some have dubbed it the "Grand Canyon." County officials say that massive amounts of sediment have moved downstream since 2005. Ironically, Mount Vernon Park has "one of the best quality forests in Fairfax County," say county officials.

The outfall repair project, now in design, is intended to stabilize the area, stem stormwater velocity, curb sediment loss, prevent more degradation and create a more natural channel design. The county also plans to remove invasive vegetation and restore native habitat. Given at least five years of degradation and ongoing damage, FODM has asked the county to accelerate the project. County Board Chair Sharon Bulova has indicated that the county will apply to the state for a Stormwater Local Assistance Fund (SLAF) grant and if it is awarded, they could possibly start construction in the spring of 2016.

Visit [http://www.fairfaxcounty.gov/dpwes/stormwater/projects/quander_road.htm](http://www.fairfaxcounty.gov/dpwes/stormwater/projects/quander_road.htm) for information on the project, current conditions, photographs and the restoration plan. FODMers may want to express their views to their member of the Fairfax County Board of Supervisors.

**Other Activities**

With support from some enthusiastic FODMers who live in the River Towers community, we have had several projects:

- **Frog survey** -- Several FODMers have conducted a survey of frogs in the marsh. On June 20, Laura Sebastianelli documented the first Cope's gray tree frog (*Hyla chrysoscelis*).
- **Bird survey** -- We expanded the annual breeding bird survey to this area.
- **Westgrove Park** -- FODMers are working with Westgrove PACK, the dog park friends group, to do more natural landscaping in the non-dog-park part of the park. We believe more trees, less grass and more native plants and shrubs can help stem stormwater runoff from the park, as well as create more natural connectivity and habitat for birds, insects and other wildlife.
- **We will have the first trash cleanup there soon.**
- **In April 2016, we will sponsor a training for volunteers to monitor water quality in a stream flowing into the marsh.**
The songs of spring peepers, American toads and especially green tree frogs were pleasant surprises among the data collected on frogs and toads in Dyke Marsh this year. We conducted our first known citizen monitoring program in Dyke Marsh West from March to August after launching our own FrogWatch USA chapter and training 18 people. 

We focused on west Dyke Marsh because some residents of the River Towers Condominiums expressed their concerns about declining frog species over the past several years. They said, for example, that they still heard bullfrogs and green frogs, but they no longer heard spring peepers, American toads, wood frogs or gray tree frogs. Experts say it is not unusual for amphibian populations to rise and fall. Yet worldwide, scientists have documented an overall decline. Without formal documentation, we did not have baseline data for Dyke Marsh West, only informal observations and anecdotes.

Beginning in early April, I heard a lone spring peeper frequently on the grounds of River Towers Condos for over a month. While I heard only one voice calling from the same location, I noted that not far away, in a wetland meadow restored at Bellevue Elementary School, a small chorus of spring peepers began calling in late March. Their songs carry a significant distance and combined with the knowledge that peepers have been documented to migrate up to two miles for breeding, the song of the lone spring peeper at River Towers became a song of hope. Describing the sound of spring peepers in years past as “delightfully deafening,” residents had not recalled hearing a spring peeper in at least three years. In May, we regularly heard a lone American toad for weeks. In June, we documented a gray tree frog. These were welcomed songs that most have not heard for at least three years. While focused on west Dyke Marsh, the surprise of the season was Ed Eder’s hearing a green tree frog near the Haul Road, not part of our 2015 study area.

In summary, we heard and documented six species. Unfortunately, we did not hear the chuckling sound of the wood frog. One River Towers resident photographed a frog that might have been either a leopard frog or a pickerel frog, but the quality of the image was inadequate for identification and we did not hear their calls in west Dyke Marsh.

In 2016, we will expand the FrogWatch survey to cover all of the preserve, perhaps even establish a bicycle survey route along the Mount Vernon trail. If you would like to learn and help in the 2016 FODM FrogWatch, please contact me at fodmfrogwatch@gmail.com.
Meet the Plants of Dyke Marsh -- Common Persimmon

BY PATRICIA P. SALAMONE

The common persimmon or Eastern persimmon tree (*Diospyros virginiana*) is probably best known for its orange fruit, a favorite of wildlife and humans alike. The tree is native to much of the eastern and east-central U.S., from southern New England southward. It is in the ebony family (*Ebenaceae*).

The common name comes from the Native Americans, who cultivated the tree for its fruit and wood; persimmon is derived from an Algonquian word meaning “dried fruit.” The species name, Diospyros, comes from the Greek, dios meaning “god” and pyros meaning, literally, “wheat” or “grain”; the name is generally interpreted to mean “fruit of the gods.”

The common persimmon grows over a wide range of conditions; it prefers moist, well-drained soil, but will also tolerate dry, poor soils, even city conditions. It prefers full sun but can also grow in part shade as an understory tree. It is an early pioneer species on abandoned cropland and often grows into thickets (derived from root suckers) in open fields and pastures. Its growth habit is variable, ranging from small and shrubby to large and spreading. The tree’s height ranges from 20 to 60 feet and its trunk diameter is typically 1-2 feet.

The flowers appear in spring (typically April to June) and are somewhat hidden by the young leaves. They are bell-shaped, about half an inch long, yellowish white and fragrant. Male and female flowers are borne on separate trees, so both male and female trees are needed to produce fruit. The flowers are pollinated primarily by insects, but also by the wind. The Pollinator Program at The Xerces Society for Invertebrate Conservation identifies the common persimmon as having special value to honey bees; the flowers produce nectar that is significant for bees in honey production.

The simple leaves are alternate along the stem, 4-6 inches long, ovate to elliptic or oblong in shape, and have smooth edges (entire). When mature the leaves are dark green, shiny on top, paler and often pubescent beneath. Their fall color is variable, from yellow to orange or scarlet, and sometimes they fall without changing color.

Another distinguishing feature is the persimmon tree’s “charcoal briquette” bark. The mature bark is thick, dark brown or dark gray, and broken into square blocks with scaly surfaces.

The plum-like fruit is a berry 1-2 inches in diameter, starting out greenish and turning orange as it matures. Each fruit has 1-8 flat seeds. The fruit ripens in late autumn and can persist into winter. The immature fruit is hard and mouth-puckeringly astringent. The ripe fruit, however, is soft and sweet, so much so that Euell Gibbons, in his field guide to wild food, *Stalking the Wild Asparagus*, calls the common persimmon the “sugar-plum tree.” Check out his recipes for persimmon-hickory nut bread, persimmon-nut chiffon pie and persimmon pudding.

References:

- [http://www.wildflower.org/plants/result.php?id_plant=DIVI5](http://www.wildflower.org/plants/result.php?id_plant=DIVI5)

National Parks Will Be 100 in 2016

BY PAMELA E. GODDARD

Soon the national park system will celebrate its 100th birthday. Our national parks are among the most beloved places in America. Can you imagine what our country would be like if visionaries had not set aside places like Yosemite, the Grand Canyon, Gettysburg, Sleeping Bear Dunes and the Statue of Liberty for people to learn about, explore and enjoy? We would live in a world with less beauty, less history, less cultural understanding and less joy.

Over the last 99 years, the national parks have become known as America’s “best idea” for good reason. Even so, our national parks face many challenges, from encroaching development to underfunding to climate change. To ensure their continued protection, we need to educate and empower people to advocate on their behalf.

The challenges can seem stark, but they can be overcome, especially when friends groups, local communities and park supporters come together to find -- and use -- our voices. The Friends of Dyke Marsh has been the leading voice to restore the Dyke Marsh Wildlife Preserve and thanks to your advocacy.

PARKS (continued on page 7)
Support the Friends of Dyke Marsh by becoming a member or renewing your membership. Benefits include the Friends' quarterly publication, *The Marsh Wren*; quarterly membership meetings with knowledgeable speakers; Sunday morning bird walks and notification of activities in and around the marsh. Most importantly, your membership lends your voice in support of the Dyke Marsh Wildlife Preserve and our efforts to advocate for full restoration of the Marsh.

We encourage you to save paper (trees) and mailing costs by becoming a member or renewing your membership online at www.fodm.org. Just click on the “Join” or “Donate” button on our membership page to make your tax-deductible contribution by credit card or from your bank account securely through PayPal. If you prefer, you can send a check, payable to FODM, P.O. Box 7183, Alexandria, Virginia 22307. The annual dues are $15.00 per household; $250.00 for life membership for an individual. You will receive a separate notice by mail or by email when your renewal is due. Thank you for your continuing support of FODM.
**The Wood Duck**

**BY ED EDER**

*Aix sponsa*, the wood duck or summerduck, arguably the most beautiful bird in North America, is both a breeder and migratory bird in the wetlands of Dyke Marsh. Breeding males have an iridescent chestnut breast, a glossy green, helmet-shaped head and ornate patterns with white stripes. Adult females are grayish-brown with a white pattern around the eye. These ducks nest in tree cavities and nest boxes near water. In Dyke Marsh, the wood duck is most easily spotted west of the George Washington Memorial Parkway.

A favorite of hunters, this duck ranks first in "harvest" on the Atlantic Flyway. Both hunting pressures and intense cutting of bottomland forests, its typical habitat, severely reduced populations toward the end of the 19th century. In fact, some ornithologists believed it would become extinct by the early 20th century, as did the populations of passenger pigeons and Carolina parrots. Once the Migratory Bird Treaty Act of 1918 and the convention with Canada were in place, the shooting of wood ducks became illegal until the ban was lifted in 1941. Populations of this duck rebounded dramatically and today, despite the killing of over one million ducks per year, the populations are demonstrably secure. Many forested habitats in the eastern United States recovered in the last part of the 20th century and the birds take readily to artificial nesting cavities that provide safer areas for reproduction.

In the U.S., nearly one-third of wood ducks are permanent residents and the rest are short distance migrants.

**WOOD DUCK** (continued on page 7)