The Marsh Wren

SINCE 1976 | THE FRIENDS OF DYKE MARSH | SPRING 2020

2020 FODM Meetings

September 8 - Wetland Ecology, 7:30 p.m., Dr. Christian Jones of George Mason University will give a presentation on wetlands at the Huntley Meadows Park Visitor's Center. Social at 7 p.m.

October 7 - Plants Shaped by Water, 7:30 p.m., Huntley Meadows Park Visitor's Center. Social at 7 p.m.

These meetings are free and all are welcome to attend.

Check our website at fodm.org for coming events and details.

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Spring Brought Some Good News

With the global coronavirus pandemic news seemingly blasting from every outlet and most people quarantined and social distancing, spring unfolded without a hitch and cheered many sufferers of cabin fever. The ospreys returned around March 9, refurbished their nests and are raising their young. We have three active bald eagle nests. Cattails greened up, may apples carpeted the forest floor and spatterdock and pickerelweed emerged from the muck. Insects pollinated plants. Amphibians, like salamanders, mated and laid eggs in spring forest pools. At least one barred owl (*Strix varia*) pair raised two young in the marsh, the first confirmed breeding pair since 2015.

We had several new records in Dyke Marsh. In January, Ed Eder photographed a Ross's goose (*Anser rossi*), which National Park Service biologist Brent Steury said was a new record sighting for the George Washington Memorial Parkway (GWMP). This goose is white with black wingtips and considered

This yellow-headed blackbird was a first for Dyke Marsh. Photo by Ed Eder

the smallest of the "light" or snow geese. Ross's goose has a short neck, rounded head and a stubby bill with no "grin patch" seen in its larger cousins due to their curved tomium, the cutting edge of the bill, Ed explained. These birds nest in the low Arctic tundra. There are an estimated two million currently in North America.

Many Dyke Marsh visitors were enchanted by another first this spring, a

SPRING *(continued on page 2)*

Dyke Marsh Restoration, Next Phase

BY GLENDA BOOTH

As we reported in our February newsletter, the first phase of the National Park Service's (NPS) Dyke Marsh restoration project, construction of a 1,500-foot breakwater and sill in the south marsh, is complete. NPS officials are working with the U.S. Army Corps of Engineers to design and model the next phase and are seeking another permit from the Virginia Marine Resources Commission. In 2010, the U.S. Geological Survey concluded that without action, Dyke Marsh would be gone in 20 years. Visit our website and the restoration page for a full report on Dyke Marsh restoration and its history.

This first phase, the breakwater, is now complete. Photo by Glenda Booth

Belle Haven Marina Has a New Manager

The Belle Haven Marina. Photo by Dorothy McManus

The National Park Service awarded a 10-year concessioner contract to operate the Belle Haven Marina to Marine Evolutions, based in Lorton, Virginia. President and founder Tim Staples said, "Marine Evolutions is excited to begin this new chapter in Belle Haven Marina's rich legacy. We want to work hand in hand with the Friends of Dyke Marsh to help the community enjoy all the marsh and the river has to offer."

We send a big thank you to George Stevens who is re-

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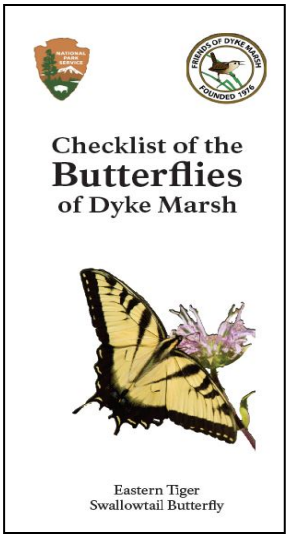
Americans have a deep and enduring love for the national parks, places we treasure because they embody our highest ideals and values. National parks tell our stories and speak of our identity as a people and a nation. In 1916, Congress created the National Park Service to manage a growing collection of special places "unimpaired for the enjoyment of future generations." The world has changed profoundly since that time, and so has the national park idea, adapting to the needs of a changing society. But at the core of the idea abides an ethic that embraces the preservation of nature and our shared heritage and promotes regard for their significance inside the parks and throughout our country. -- National Parks Second Century Commission, 2009

Butterfly and Host Plant Checklist



FODM has prepared a new butterfly checklist. It includes butterflies we can see in Dyke Marsh and many of their host plants. Volunteers have conducted butterfly surveys every year since 2015 from April to October. Thanks to all who helped: FODMers Jessica Strother and Jim Waggener; and Mark Maloy and Brent Steury from the National Park Service. If you would like to have a copy, email info@fodm.org. It's on our website on the Marsh Life page under "Butterfly."

SPRING *(continued from page 1)*

yellow-headed blackbird (*Xanthocephalus xanthocephalus*), another record for the George Washington Memorial Parkway according to Brent. The bird was a male with a stunning yellow head, black body, yellow breast and white wing markings. These birds typically nest in the West and Midwest in colonies, often alongside red-winged blackbirds in bullrushes or cattails. They forage on insects, grain and wet seeds.

In mid-March, FODMers Laura Sebastianelli and Larry Cartwright found the nest site of a red-shouldered hawk (*Buteo lineatus*). This was the first red-shouldered hawk nest documented in Dyke Marsh since Larry started the breeding bird survey 27 years ago. Last year they saw a fledgling but could not find a nest.

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Visit our website at
www.fodm.org
or on **Facebook.com**

Board members can receive email at info@fodm.org. *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 at left. Special thanks to Duncan Hobart for managing our website (www.fodm.org).

President's Message

Glenda C. Booth, President, Friends of Dyke Marsh

As summer approaches and we try to move beyond quarantines and the coronavirus, let's appreciate what I call "ecotherapy." Doctors are increasingly prescribing time outdoors for our mental and physical health. "Spending time in natural environments increases physical activity and stimulates the parasympathetic autonomic nervous system, hence decreasing the risk of developing chronic disease," says the Park Rx website, an organization dedicated to reducing disease, improving health and fostering environmental stewardship. As Henry David Thoreau wrote, "We can never have enough of nature."

In the summer, plants reach their peak, insects swarm about and young birds fledge. It's also a good time to study dragonflies and damselflies, in the order Odonata. They can be from half an inch to five inches long. Most dragonflies have large multi-faceted eyes and two pairs of strong transparent wings. They hold their wings perpendicular to their bodies when at rest. Damselflies are smaller. Their eyes bulge to the side and most hold their wings together toward the rear above their torso when at rest. Excellent aerialists, they mate in flight and females drop eggs into the water. Volunteers have identified 36 dragonfly and damselfly species in Dyke Marsh since 2016.

A Russet-tipped Clubtail dragonfly, seen in Dyke Marsh. Photo by Ed Eder

Firefly Watch

Speaking of aerialists, a February study sounded alarms about fireflies or lightning bugs. Worldwide they face habitat loss, artificial light pollution and pesticides, according BioScience. Nighttime lights interfere with reproduction. People walking in their habitat can trample their larvae or flightless females. Connecticut has a first-of-its-kind firefly preserve in New Canaan.

Technically, fireflies are neither flies nor bugs, but beetles that light up using a chemical reaction. There are three main families of flashing fireflies in North America. Mass Audubon manages the "Firefly Watch Citizen Science Project," volunteers who track fireflies in one location, like their yard, for ten minutes a week. To help, visit https://www.massaudubon.org/get-involved/citizen-science/.

Otter Spotters

Want to become an otter spotter? The Chesapeake Bay Otter Alliance is creating a map of sightings of otters and their poop, called spraint. North American river otters (*Lontra canadensis*) are the only otter species in the Chesapeake Bay and little is known about them, according to organizers. "No one has ever done scientific research on otters in the Chesapeake Bay area," said Karen McDonald. "Otters need a clean watershed to live. We are all watershed neighbors, and we need to be good neighbors." Sign up at serc.si.edu/chesapeake-bay-otter-alliance/get-involved and learn more about otters at potomac.org/blog/2019/5/2/4-things-you-otter-know-about-river-otters.

FODMer Jane Gamble won the Washington Post's Squirrel Photography Contest with this photo.

Amid all the grim news this spring, here is some good news. FODMer Jane Gamble won the Washington Post's annual Squirrel Photography Contest. On April 15, columnist John Kelly wrote, "She's a passionate birder and amateur photographer who can often be found training her camera lens on birds at Huntley Meadows and Dyke Marsh in Virginia. But when the birds aren't cooperating, she'll turn to the squirrels." Jane told him, "It's a little bit of wildness in my little suburban yard." Congratulations, Jane!

And more good news: The Virginia General Assembly passed and Governor Ralph Northam signed into law the Clean Economy Act, a landmark bill to reduce greenhouse gas emissions that are warming the planet. The legislature also approved measures to require a state wildlife corridor action plan, to strengthen tree preservation and to allow localities to impose a five-cent fee on single-use, plastic bags. For more information on new conservation laws, visit www.vcnva.org. Be sure to thank our state delegates and senators and the governor.

Our National Park Service (NPS) partners had to make many difficult decisions this spring to keep people safe and protect parks. NPS Acting Director David Vela said, for example, he could not "put six people in a truck" to fight a fire. There were many reports of inappropriate activities in our national parks, like drag racing on the Skyline Drive. Please help us and NPS protect our national parks. Report any questionable activity in Dyke Marsh to the U.S. Park Police at 202-610-7500.

Glenda C. Booth

Glenda C. Booth is the president of the Friends of Dyke Marsh and active in conservation issues in Virginia.

New Beetle Species Found in Dyke Marsh Wildlife Preserve

BY BRENT STEURY, Natural Resources Program Manager, George Washington Memorial Parkway

A study published in the January 15, 2020, journal of the Virginia Natural History Society documented 66 species of rove beetle (family Staphylinidae) found in the Dyke Marsh Wildlife Preserve. One of these is a yellow, quarter-inch-long rove beetle in the genus *Arpedium* that is a species new to science (not yet described or given a scientific species name), illustrated below. The study also found five species of rove beetle in Dyke Marsh that were previously unknown in the Commonwealth of Virginia. These five species are *Acylophorus agilis, Philonthus palliates, Philonthus umbrinoides, Stenus croceatus* and *Thinodromus arcifer*. Each is illustrated below. This amazing diversity of rare species is further evidence of the importance of freshwater, tidal marsh habitats as havens for wildlife.

Rove beetle species found in the Dyke Marsh Wildlife Preserve that are not known from anywhere else in Virginia: Top row, left to right, *Arpedium* new species, length 4.1 mm, *Acylophorus agilis*, length 4.5 mm, and *Philonthus palliates*, length 4.5 mm; bottom, left to right, *Philonthus umbrinoides*, length 7.3 mm, *Stenus croceatus*, length 4.0 mm, and *Thinodromus arcifer*, length 2.5 mm.

Dyke Marsh is now less than half the size that it was in 1940 when sand and gravel mining operations permitted in the marsh, and subsequent erosion resulting from the mining, decimated the once pristine tidal habitat. The new and rare rove beetles recently discovered in the marsh were found in small remnants of a once, much grander marshland. How many other new and rare species were lost during mining operation we may never know; however, we do know that marsh wrens (*Cistothorus palustris*), the namesake of this newsletter, flourished in Dyke Marsh prior to 1940, but sadly, have now apparently vanished from the marsh and visitors are no longer treated to their iconic song emanating from the cattails. Sadly, after 60 years and $23.5 million spent to protect the marsh remnants, three-quarters of the marsh shoreline still remains vulnerable to erosion.

Rove beetles are probably the largest family of beetles in the world, with more than 64,000 species documented worldwide and over 4,500 species in North America. This beetle family is generally recognized by its short, truncate elytra (hardened forewings) that leave exposed a large dorsal part of the abdomen. In many species, the abdomen is flexible and is waggled from side to side as the beetle moves along the ground. They are of ancient descent, having been found in fossils from the more than 200 million years old Jurassic/Triassic boundary. No other family of beetles has been as successful as rove beetles at living in such an enormous number of diverse habitats.

Adults of most species are nocturnal or shelter in dark areas during daylight hours, but some, such as the *Stenus croceatus* found at Dyke Marsh, are active in daylight. They are common components of soil biota, found in decaying leaf litter or deeper soil layers where they prey upon a variety of soil inhabiting organisms or feed on decaying plant material or on fungi. However, this family fills nearly every ecological niche and they can be found in rotting wood, dung, carrion, caves, mammal burrows and ant and termite nests. Some smaller species (most species are two to eight millimeters) have an ant-like habitus and live among particular ants or other social Hymenoptera or termites. Others are associated with birds or ectodermally on mammals. These associations can be beneficial (consuming the host waste material) or parasitic, when they prey on the eggs, larvae or stored food of the hosts. The larvae of the rove beetle genus *Aleochara* are parasitoids of fly puparia. Because of their hyperdiversity of form, habitats and prey, their ancient origins and relatively well-preserved fossil history, the rove beetles make interesting subjects for scientific study and they are becoming more widely used as bioindicators of environmental conditions in applied sciences such as forest research and conservation.

Copies of the full article, which documents 209 rove beetle species from the George Washington Memorial Parkway (Dyke Marsh is a unit of the Parkway) and 792 species from Virginia, Maryland and the District of Columbia, can be purchased from the Virginia Natural History Society by contacting them at www.virginianaturalhistorysociety.com. Request volume number 53.

Photos by Brent Steury

> ". . . every living thing has an important place in our planet's web of life."
>
> – Lisa Bramen, Nature Magazine, spring 2020

The Dynamics of Wetland Ecosystems, September 8

On September 8, 7:30 p.m., Dr. R. Christian Jones, Director of George Mason University's (GMU) Potomac Science Center will give a presentation on wetlands ecology, conservation and challenges at the Huntley Meadows Park Visitor Center, 3701 Lockheed Boulevard, Alexandria, VA 22306. We will host an informal social starting at 7 p.m. This is our rescheduled May meeting.

Wetlands at Dyke Marsh. Photo by Glenda Booth

Dr. Jones will explore wetlands ecology, challenges facing wetlands and common wetland animals and plants, including submerged aquatic vegetation (SAV) in the Potomac River. He has done extensive work tracking the recovery of SAV in Gunston Cove which was highly degraded in the early 1980s and has undergone an astonishing recovery. He is currently working to understand the dynamics of a non-native, Eurasian water chestnut (*Trapa bispinosa*) which is spreading in the Potomac River and into ponds in Northern Virginia.

Dr. Jones received his Ph.D. from the University of Wisconsin-Madison in botany with a minor in limnology and oceanography. He has a master of science degree in biology from Vanderbilt University. His work focuses on tidal freshwater ecosystems (emphasizing plankton and macrophytes), stream ecology (emphasizing benthic macroinvertebrates) and watershed management. Dr. Jones teaches courses in waterscape ecology, freshwater ecology and multivariate analysis. He has been on the GMU faculty since 1980.

New Citizen Science Tool for FODMers

BY LAURA SEBASTIANELLI

The sign posted at the Haul Road Trail.

FODM is piloting two photography stations to harness the power of the public -- citizen scientists -- to help document and better visualize landscape changes over time in the Dyke Marsh Wildlife Preserve. Changes in a landscape can be slow to see, whether they are seasonal changes, restoration results or longer-term changes.

We invite everyone to take photographs at two new Chronolog stations, one on the Haul Road Trail at the native plant site, DMW-101, and the other on the wooden boardwalk across from Tulane Drive, DMW-102. Each station has a sign and is a post with a three-sided bracket mounted atop the post where you put your smartphone. Align your cellphone in the bracket and snap a photo of the landscape. Then e-mail your photo to upload@chronolog.io with the station location as the subject line (either DMW-101 or DMW-102).

Chronolog software will automatically align and crop your photo and stitch it into the time lapse movie of the location. They will send you a reply and thank you and a link to the time lapse. (Note: We will not collect nor ever even see your e-mail.) We will also share the time lapse via social media, on our website and in our electronic newsletter. Please participate often.

Misunderstood and Unappreciated: Snakes

On warm, sunny days, just east of the dogleg turn on the Haul Road trail, you can often see eastern ratsnakes (*Pantherophis alleghaniensis*) basking in the trees. Adults are shiny black with a white throat and a partially checkerboard-patterned belly. In his book, The Reptiles and Amphibians of the Washington, D.C. Metropolitan Area, Alonso Abugattas wrote that they are common, can reach six feet in length and lay five to 44 eggs in July. They eat rodents, birds, bird eggs, salamanders and lizards and kill their prey by squeezing it. Eastern ratsnakes are preyed on by foxes, hawks and owls.

Animals like spiders, bats and snakes are often unappreciated, in fact needlessly feared, but all have a role. Snakes can help keep rodent populations in balance. Eastern ratsnakes eat, for example, white-footed mice, primary hosts for ticks that carry Lyme's disease. Snakes do not bite people unless provoked or threatened.

Virginia has 30 snake species, of which 19 can be found in northern Virginia. There is only one venomous snake native to Fairfax County, the northern copperhead (*Agkistrodon contortrix mokasen*). Adults usually have a bronze-colored, triangular head, numerous hourglass-shaped bands and cat-like vertical pupils The eastern ratsnake and other non-venomous snakes have round pupils.

"Teach your kids to look around for snakes, admire their beautiful, silent motion and let them be," wrote Barbara Damrosch in a 2010 Washington Post article. For more, visit http://www.virginiaherpetologicalsociety.com/.

Two eastern ratsnake photos by Glenda Booth

Meet the Plants of Dyke Marsh - Wild Rice

BY PATRICIA P. SALAMONE

I was surprised to learn that wild rice grows in our area; I've always associated wild rice with the Great Lakes region, with an image of its being gathered by Native Americans in canoes. That species is most likely northern wild rice (*Zizania palustris*), which has been domesticated and is grown commercially but is also still gathered by Native Americans in the traditional manner.

Wild rice flowers in late summer. Photo by Glenda Booth

But its cousin, southern wild rice (*Zizania aquatica*), is found in Dyke Marsh and other local wetlands like Huntley Meadows; it is native to the entire east coast of the U.S. and Canada as well as the Great Lakes region. (Northern and southern wild rice both have wide distributions in the U.S. and Canada, with a fair amount of overlap, but *Zizania aquatica's* range extends much further south, as you would expect from its common name.) It is a wetland dweller (its wetland indicator status is obligate); its native habitat is marshes, ponds, lakes, and the borders of slow-moving rivers.

Southern wild rice (or just wild rice) is a fast-growing annual, reaching a height of up to 12 feet in its single season. The leaves are long and narrow, about 3 feet in length and 1 to 2 inches wide. It is a member of the grass family (*Poaceae*) and is wind pollinated. It blooms in mid to late summer, producing a beautiful inflorescence with an upright cluster of female flowers at the top and the more conspicuous male flower spikelets drooping below. The seeds, up to half an inch long, ripen in September and October to a dark purplish black.

The fun-to-say genus name *Zizania* is derived from the Greek zizanion (plural zizania), which is believed to have referred to a plant called darnel, a ryegrass which looks like wheat in its early stages of growth. Zizania seems to have become something of a catch-all term for an undesirable plant; it is translated as "tares" or sometimes "weeds" (in comparison to the good plant, wheat) in the King James version of the Bible, where it is even used as a metaphor for evil.

Broad-winged skipper from Wikimedia Commons, posted to Flickr by Judy Gallagher

Wild rice, though, doesn't deserve such calumny. It's a beautiful plant that provides food for wildlife (and sometimes humans) and also serves (along with other wetland plants) as a host plant for the broad-winged skipper (*Poanes viator*). What's not to like?

Saving Pumpkin Ash Trees

In 2015, 2017 and 2019, FODM funded the treatment of 18 pumpkin ash trees (*Fraxinus profunda*) in Dyke Marsh for the invasive emerald ash borer (EAB) (*Agrilus planipennis*), an insect that is killing ash trees all over the eastern U.S. With the Park Service's agreement, we hired Bartlett Tree Experts to inject Tree-age into the root flares of 18 trees every two years. We could lose up to 1,000 ash trees in Dyke Marsh. For now, the 18 treated trees seem to be largely healthy, but there are no guarantees. This spring, the treated 18 trees bloomed and leafed out. This is a 20-year effort.

The pumpkin ash name comes from their usually swollen or pumpkin-shaped butt or base. These trees thrive in wet areas like swamps, floodplains and bottom lands, can reach 130 feet and have a 68-inch diameter. The EAB is a metallic green, wood-boring beetle from Asia, one-half inch long and one-eighth inch wide. Thank you, Robert Smith, for leading this project and thanks to our generous donors for supporting it.

Call to Action

Help Test Water Quality

Please help us test the habitat quality in a stream flowing into west Dyke Marsh. We will scoop up sediments from the stream bed and then examine them for benthic macroinvertebrates and other "critters." You don't need any special expertise. For a schedule and other details, please send an email to Glenda Booth at gbooth123@aol.com.

Help Save Our Native Plant Site

Given the National Park Service's limits on volunteer activities this spring, we have not been able to tackle non-native plants in our native plant area, but will have to wage a full-stage attack once allowed.

In 2018 and 2019, we planted over 4,000 native plants, with help from many supporters, partners and generous donors. Please join us when we put out the call via e-mail. We will probably need teams every two weeks until October. To let us know that you want to help, email info@fodm.org.

A 1972 Directive: Restore Dyke Marsh

A 1972 directive urges Dyke Marsh be restored to the natural beauty shown here. Photo by Ned Stone

Fortunately, phase one of Dyke Marsh's restoration is completed, as we report in this issue. From 1940 to 1972, Smoot, Sand and Gravel dredged and hauled away over half of the marsh, which destabilized the wetland and put it in a net erosional, rather than a net depositional state. You can read the marsh's restoration history on our website. We share here a compelling, 1972 memorandum by Nathaniel P. Reed, then an Assistant Secretary at the U.S. Department of Interior, to Mr. Russell E. Dickenson, General Superintendent, National Capital Parks.

"I flew over Dyke Marsh last weekend. I was horrified! If the work is legal – and I doubt that – it is amoral. I want to know –

1. How quickly all dredging within Dyke Marsh can be halted.

2. What steps are being undertaken to force the Smoot Co. to 'reconstruct' the marsh per the original agreement.

"I consider this a priority as the present operation borders on a scandal. I do not want another incoherent briefing by a NPS employee who doesn't know what the word 'environment' means. I want a rational plan for ending the dredging operation on a priority basis.

"I do not want the remaining marsh turned into an upland 'recreation' area. I want a Marsh. Any thought of using sludge from Blue Plains will also be forgotten. Just figure out a way to stop what you are doing now – promptly.

"Please call Mr. Bohlen and Mr. Gardner of my staff to further discuss this memorandum."

Welcome New FODM Members

FODM welcomes our **new members** Victoria Elliott, Bridget Fahey, John and Eileen Hurley, Judy Joyce, Debo West and Ron Paci, Stephen Pingeton and Tracey Whaley. Welcome **new Life Member** Tony Morris and **conversions to Lifetime Membership** Catherine Ledec and Gary Russell.

MANAGER *(continued from page 2)*

tiring after what he described as "35-plus wonderful years." He e-mailed, "It has been my privilege to interact with thousands of adults and children to foster this community of recreation, fun and exploration in our Alexandria backyard. I will be helping with the transition. Tim has asked the entire staff to stay on so you will continue to see familiar faces at the marina." The website for the new management company is https://www.marineevolutions.com/. We look forward to working with Mr. Staples and his team.

U.S. Park Police, Emergency Number: 202-610-7500

Sunday Morning Bird Walks

Bird walks are held Sunday mornings, all seasons. Meet at 8 a.m. in the south parking lot of the Belle Haven picnic area. Walks are led by experienced birders and all are welcome. Check our website for updates.

FODM Membership - Dues and Contributions

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. Just click on the "Join" or "Donate" button on our membership page at www.fodm.org to make your tax-deductible contribution by credit card or from your bank account securely through PayPal. For help, info@fodm.org. 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 notice by mail or by email when your renewal is due. A financial statement is available upon written request from the Virginia Office of Charitable and Regulatory Programs. Thank you for your support of FODM.

DUES AMOUNT..…… $ _____
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TOTAL AMOUNT ENCLOSED..……. $ _____

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Please address any questions or comments about *The Marsh Wren* to Dorothy McManus and about membership to Bob Veltkamp. You may contact them by mail at FODM, P.O. Box 7183, Alexandria, Virginia 22307-7183, by telephone or by email (see page 2).

West Dyke Marsh Turned Neon Green

On the downside, on March 20, around 7 a.m., several FODMers observed that the water flowing into west Dyke Marsh was neon green. This part of the marsh is around 15 to 20 acres and west of the parkway.

We contacted local and state agencies and the National Park Service and all of them promptly sent officials to inspect the site. By 9:30 a.m., the tide had apparently carried the green water out of that part of the marsh and it was not visible later that day or the next day. County staffers found no evidence of a sanitary sewer line break, a sanitary sewer overflow or a discharge from the storm drainage system and no hazardous substances "to act on while on scene."

On March 20, water flowing into west Dyke Marsh. turned neon green. Photo by Laura Sebastianelli

County officials conducted some tests, which they described like this: "The stormwater investigator collected a sample for analysis in the office. He found no detergents in the sample. Dissolved oxygen was 6.0 mg/L and pH was 6.5, both meeting state water quality standards. Specific conductivity was 500 µS/cm3, which is not unusual for urban streams; we would normally flag at around 1,000 µS/cm3."

That afternoon, GWMP Superintendent Charles Cuvelier informed us that Virginia Department of Environmental Quality (DEQ) authorities identified "green dye" as a possible cause of the discoloration and he said that it was "not practical" to try to find the source. We have not received reports that confirm dye as the source or nor reports of what exactly it was. The answer remains a mystery.

We thank Fairfax County Board of Supervisors Chairman Jeff McKay, Mount Vernon Supervisor Dan Storck, State Senators Adam Ebbin and Scott Surovell, Superintendent Cuvelier and county and Virginia DEQ staff for their prompt action.

The Marsh Wren

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