

The Marsh Wren

SINCE 1976

THE FRIENDS OF DYKE MARSH

SUMMER 2018



FODM Quarterly Meeting

Wednesday, September 12, at 7:30 p.m., Huntley Meadows Park, 3701 Lockheed Blvd., Alexandria, VA 22306. Phone 703 768-2525. Free to all.

2018 Meetings

September 12, November 14

Calendar of Events

September 19, 2:30 - 5:30 p.m. Plant native plants.

September 22, 12 noon - 3 p.m. Trash Cleanup. Meet at Haul Road entrance.

Oct 27, 9:30 a.m. Water Testing, eml gbooth123@aol.com.

CONTENTS

FODMers Honored	2
President's Message	3
Pumpkin Ash Trees	4
Roving Visitor Center	4
Native Plants Planted	5
Plants of Dyke Marsh	6
Dragonflies Surveyed	8

How Plants Support Wildlife

At FODM's September 12 meeting, entomologist Dr. Desiree Narango will discuss her research results that help explain how some plants can support biodiversity and complex food webs. She will explain the extent to which native and non-native plants support insectivorous birds and other wildlife.

"I study the ways that plants and animals interact with each other, their environment and with us," she explains. "Most of my work takes place in novel landscapes drastically altered by humans, urban forests and residential yards. My interdisciplinary work uses field, lab and modeling-based approaches to answer questions that span across scales and taxa. My ultimate goal is to provide data-driven recommendations for homeowners, land managers and conservationists to help preserve biodiversity in a rapidly changing world."

Her research focuses on urban ecology, food webs and trophic relationships,



Native trees provide food for Carolina chickadees. Photo by Doug Tallamy

behavioral ecology, plant-animal and tritrophic interactions, network analysis, conservation, nonnative plants, novel ecosystems, stable isotopes and data science.

In one study, she compared how well native and nonnative trees provide

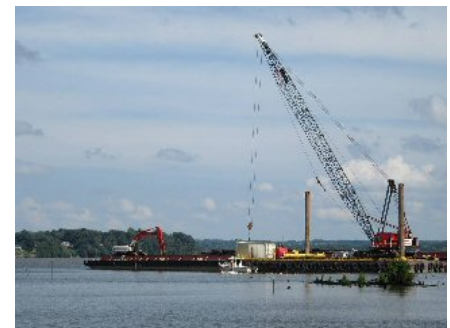
MEETING (continued on page 2)

Dyke Marsh Restoration Is Underway

BY GLENDA BOOTH

Construction to restore Dyke Marsh began in July. Shortly after July 4, crews began clearing and grubbing along the shoreline where the breakwater will tie into the land. They have also started setting the first marine mattresses and will soon fill them with stone. Crews are lowering the mattresses from a barge to minimize disturbance to the river bottom and they will stack them like large blocks, one on top of the another, to form the breakwater's structure, with armor stone on top. Construction of the breakwater will take approximately six to nine months.

In its 2010 and 2013 studies, the U.S. Geological Survey (USGS) reported



Restoration contractors' equipment was visible from the GW Parkway in early August. Photo by Glenda Booth

that building a breakwater should be the

RESTORATION (continued on page 5)

FODMers Honored

Congratulations to three FODMers recently recognized.

The Fairfax County Board of Supervisors appointed Walter Clarke, a Vice President at Burke and Herbert Bank, to the Planning Commission to represent the Mount Vernon district. Walter has been involved in the Embark Richmond Highway Advisory Group, the Mount Vernon and Alexandria Chambers of Commerce, the Salvation Army, the Southeast Fairfax Development Corporation, the Friendship Firehouse Association and other local groups.

Supervisor Dan Storck, a FODM member who represents Mount Vernon on the Board of Supervisors, selected FODMer Catherine Ledec as Mount Vernon's Lady Fairfax.

Cathy is on the Fairfax County Tree Commission and president of the Friends of Huntley Meadows Park. In 2015, she received the Virginia Recreation and Parks Society's Distinguished Volunteer Service Award. She is also active with the Mount Vernon Citizens' Associations and this year led efforts to design, fund and install natural landscaping at the Mt. Vernon Governmental Center.

FODMer Deborah Hammer received the Eileen K. Crawford Outstanding Educator Award, recognizing her work to improve the lives of Arlington's special needs children and youth. An autism specialist, Deborah has helped students with special needs for over 20 years. She founded a group to support young adults with Asperger's syndrome and autism and was a delegate for the World Bank/United Nation's



Walter Clarke



Catherine Ledec

International Disability Caucus. Deborah also received a scholarship this summer to attend the National Audubon Society's Hog Island educator's week in Maine. In addition to volunteering for FODM, she is a Virginia master naturalist and bat educator, researcher and rehabilitator and has volunteered with the Save Lucy Campaign.



Deborah Hammer

MEETING (continued from page 1)

food for Carolina chickadees. The study followed Carolina chickadees nesting in suburban areas to analyze the source of caterpillars and other food items brought to nestlings. Most of the food items fed to nestlings came from native plants, even when non-native vegetation was abundant. "This highlights the importance of native plants to support the successful fledging of young. No researcher had specifically looked at this issue before," says FODMer Ed Eder.

Dr. Narango's research can help people choose trees, shrubs and other plants that best support habitat for birds and other wildlife.

Dr. Narango received her Ph.D. in Entomology and Wildlife Conservation from the University of Delaware in May. She has worked with Dr. Doug Tallamy, University of Delaware, and Dr. Peter Marra, Smithsonian Migratory Bird Center. She is an active birder and gardener.

This free program is cosponsored by Plant NOVA Natives, the Northern Virginia Bird Club and the Potowmack Chapter of the Virginia Native Plant Society. It will begin at 7:30 p.m. at the Norma Hoffman Visitor Center of Huntley Meadows Park, 3701 Lockheed Boulevard, Alexandria 22306. If you use a GPS device to find the park, enter the street address, not the park's name.

Editor:

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Visit our website at
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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

"We ultimately conclude that Dyke Marsh presently is in its late stages of failure as a fresh-water tidal marsh system. . . In the absence of human efforts to restore the equilibrium between marsh and tide and equilibrium to the other natural forces acting on this wetland, Dyke Marsh likely will continue to accelerate its degradation, erosion and fragmentation until it is gone. This likely will occur prior to 2035 AD." This is the alarming conclusion of the U.S. Geological Survey's 2013 update of its 2010 study examining the state and future of Dyke Marsh.

We are happy to report, finally, that, in USGS's parlance, concrete "human efforts" have begun. After many years of planning, studies, debate and delays, in July, the project's contractor started phase one, building a breakwater to replicate the former promontory removed by dredgers, a natural feature that protected the wetlands system.

"Human beings have destroyed about half of the world's wetlands in the last 200 years," wrote Bill Streever in *Bringing Back the Wetlands*. Perhaps this project can start to repair some of that damage. Remember, wetlands provide valuable ecological services and, in the words of Virginia Institute of Marine Science biologist Kirk Havens, are "biological supermarkets."

We have previously detailed restoration's broad support. That support helped get restoration started. We commend our partner,



A goal of restoration is to return the Preserve to the beauty shown in this photo. Photo by Glenda Booth

the National Park Service, for its persistence. We thank the Department of Interior for the bulk of the funding. Onward! **Eager Volunteers** There is never enough space to recognize our many volunteers, but for now, hats off to many contributors and to those who helped us put in around 3,000 native plants. Thanks to the project's partners and grantors too. We have been blessed with rain and the plants are doing well. We'll plant more on September 19. Now the challenge is to control invasives.

National Park Stresses

Our national parks are facing a \$12 billion deferred maintenance backlog. With seven million visitors, the George Washington Memorial Parkway, the seventh highest-visited park in the NPS, has six rangers. Six! The maintenance staff has dropped from 75 to 20 in five years. Will Congress respond? Four U.S. Senators -- Mark Warner

(Virginia), Lamar Alexander (Tennessee), Rob Portman (Ohio) and Angus King (Maine) -- have introduced the National Park Service Restore Our Parks Act. The bill establishes a dedicated park maintenance fund that provides 50 percent of the unallocated receipts from oil, gas, coal, alternative or renewable energy development up to \$1.3 billion per year for a potential total of \$6.5 billion.

The bill sets aside 65 percent of the funds for repairing non-transportation resources and 35 percent for transportation projects. Calling it a "very strong and historic bill to rebuild our national parks," Interior Secretary Ryan Zinke said,



The United States Capitol. Photo by Glenda Booth

False Alarm! This summer, National Park Service officials became concerned that a sunken vessel might be in the Dyke Marsh restoration project area. NPS contracted with underwater archaeologists who found not a sunken vessel, but submerged trees and other debris. So thankfully, restoration got the go-ahead.

"Park infrastructure is about access for all Americans. In order for families, children, elderly grandparents or persons with disabilities to enjoy the parks, we need to rebuild basic infrastructure like roads, trails, lodges, restrooms and visitor centers. This is not a Republican or Democrat issue, this is an American issue, and I think that the bipartisan body of lawmakers who put this bill forward is proof." There's hope.

Climate Change Is Harming Virginia

Virginia is experiencing the effects of climate change, reports the Natural Resources Defense Council. Examples: more coastal flooding and changes in seasonal patterns that are making summers hotter, extending allergy seasons and increasing mosquito and tick-borne diseases. Northern Virginia had from six to 15 ozone exceedances days from 2011 to 2015, the highest in the state. Learn more at <https://assets.nrdc.org/sites/default/files/climate-change-health-impacts-virginia-ib.pdf>.

Finally, here are some inspiring words: "There can be no purpose more enspiriting than to begin the age of restoration, reweaving the wondrous diversity of life that still surrounds us." -- Edward O. Wilson

Glenda C. Booth

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

Fingers Crossed for Pumpkin Ash Trees

BY ROBERT SMITH

FODM's efforts to save some of the marsh's pumpkin ash trees (*Fraxinus profunda*) from emerald ash borer (EAB) (*Agrilus planipennis*) destruction appear to be having some success, so far. Park Service officials conservatively estimate that Dyke Marsh could lose 1,000 ash trees from this invasive pest. EAB infestation has been steadily spreading across the eastern United States since its introduction in Michigan in 2002. It is in many Washington-area national parks and is nearly 100 percent fatal to ash trees.

In 2014, at the suggestion of the National Park Service (NPS), the Friends of Dyke Marsh undertook a project to protect a small stand of pumpkin ash trees from this insect. The pumpkin ash is a fairly rare ash species, but it made up a substantial part of the tree coverage in Dyke Marsh, especially along the shorelines.

FODM and NPS are trying to protect a cluster of pumpkin ash trees through a semi-annual injection of Tree-age (with the active ingredient Emamectin benzoate), trees located east of the long bike path boardwalk and just south of the big gut. We are currently treating 16 trees of varying sizes. This spring, fortunately, all of them flowered and subsequently leafed out. This is in stark contrast to neighboring ash trees and those that can be seen that are just bare skeletons when looking south from the first platform on the boardwalk that extends from Haul Road.

Work on the project began in the spring of 2015 when the trees were in flower but before they had fully leafed out. When in flower, the males and females can be distinguished. Working with the NPS, we selected a mixed group of nine trees and marked and protected them with plastic mesh from possible beaver damage. Later in the spring, when they were leafing out, a licensed applicator (Bartlett Tree Experts) used "IV" equipment that allowed the trees to take up the pesticide through their root stems. Depending on the size of the trees, the treatment required from three to six injection points and it took about 30 minutes for each tree to take up the allocated dose. In the fall, a team from the North Carolina Botanical Garden collected a large number of pumpkin ash seeds from about 20 different trees for

storage and future planting.

Thanks to a generous contribution from FODM member Norm Farrell, we were able to repeat this process in the spring of 2016 and added four more trees. The applicator used a new and more reliable injection process that also substantially speeded up the treatment process.

Early in 2017 there was an unfortunate setback when Park Service staff mistakenly cut down three of the original nine trees doing tree safety maintenance. To compensate for this, NPS paid for treating our remaining 10 trees and added another six that included all the remaining healthy ash trees adjacent to the small, original cluster. The result has been better than expected since all six of those new trees and the remaining 10 from the first two years flowered and leafed out in the spring of 2018. Later this year, we will do another visual survey to evaluate seed production in the study group. Hopefully, all will continue to do well and FODM will support inoculating all 16 again next spring.

Tree-age remains the "gold standard" for protecting individual trees. However, the U.S. Forest Service continues to pursue biocontrols against EAB, i.e., parasitic insects. Beginning in 2007, they are now breeding and releasing four different parasitoids. It remains to be seen if these imported parasites can establish themselves and provide substantial protection, especially for larger ash trees.

The emerald ash borer prefers mature trees so a number of saplings and sprouts from dead trees continue to come up in the marsh. Hopefully some of those, and our stout group of 16 study trees, will prosper and provide a source of re-growth for these trees in Dyke Marsh in the future.



Several of the treated leafed-out ash trees in the foreground stand in sharp contrast to untreated trees nearby. Photo by R. Smith

Roving Visitor Center is Reaching Out

A mobile National Park Service "visitor center" is now operating up and down the George Washington Memorial Parkway (GWMP). We reported on its pending "debut" in our winter issue, but now it has arrived. The colorful van has a walk-up window, a digital weather display, audio equipment and a resource desk. Park officials can conduct programs, offer materials and other items along the parkway and use it in most weather because it has a retractable awning.



The mobile visitor center will bring the GWMP units closer to the people and the people closer to all parts of the parkway, including Dyke Marsh. GWMP now only has one true visitor center, in Great Falls Park. Thank you, NPS, for making our national parks more visible and closer to the people.

In the photo at left, NPS Park Rangers Miguel Roberson and Trudy Roth point out the Dyke Marsh Wildlife Preserve on the van's side (photo by Glenda Booth).

Volunteers Restore Dyke Marsh with Native Plants

BY GLENDA BOOTH

On May 9, 20 dedicated volunteers and National Park Service (NPS) staffers planted around 1,500 native trees and plants on a .65-acre plot on the west side of the Haul Road trail in the Dyke Marsh Wildlife Preserve. On June 20, another 20 volunteers planted more, bringing the total to around 3,000 plants. Among others, the group planted spicebush, milkweed, winterberry, wing stem, pyeweed, tick-trefoil and moonflower vine and grasses such as deer-tongue, Virginia rye and riverside rye. Trees included sycamore, tulip tree, cottonwood, maples and black gum. These



A volunteer places one of 3,000 native plants to help restore a .65-acre plot along Haul Road. Photo by Glenda Booth

native species will provide more support for the native insects, birds and other wildlife with which they co-evolved. Like most of the land near the Haul Road trail, the site has long been overrun with non-native or invasive plants, like English ivy, mile-a-minute, porcelain berry and stiltgrass.

We will have a third planting day this fall and welcome volunteers. We also need volunteers to help control non-native plants in the area.

You can sign up at info@fodm.org.

NPS's Brent Steury conducted a training on controlling five invasive plants there, prioritizing stiltgrass (*Microstegium vimineum*) and mile-a-minute (*Polygonum perfoliatum*). "If they set seed, we've lost," he stressed. FODM can conduct more trainings.

On the good news front, since NPS cleared the area, several "volunteer" native plants have emerged from the seedbank, like the yellow passion flower (*Passiflora lutea* L.), leafcup (*Polymnia* L.) and native violets.

Initiated by FODM, the project has three other partners -- the National Park Service, Earth Sangha and the Audubon Society of Northern Virginia (ASNV). FODM greatly appreciates the generosity of many FODM contributors and grants from the National Environmental Education Foundation, Transurban, ASNV and Earth Sangha. FODM used these funds to purchase plants for the project.

The Mount Vernon Gazette, Connection newspapers, has an article here: <http://www.mountvernongazette.com/news/2018/jun/26/volunteers-restore-habitat-dyke-marsh/>.



A sea of blue flags marks the location of newly planted grasses, shrubs and ferns. Photo by Glenda Booth

RESTORATION (continued from page 1)

National Park Service's first step in the restoration project, that the breakwater would be the minimal protection needed to protect and enhance natural deposition. Smoot Sand and Gravel's dredging of the marsh from 1940 to 1972 hauled away over half of the wetland. The dredgers completely removed a natural promontory near the south end of the marsh, a major contributor to the marsh's destabilization, reported USGS. USGS stressed that this action removed the geologic wave protection that existed back to at least 1864 and altered the size and function of the tidal creek network.

The breakwater is designed to replicate the former promontory. Sarah Gross of the U.S. Army Corps of Engineers (COE), NPS's partner in the project, explained, "The breakwater will help shield the existing and planned restored marsh from erosion and will help re-establish the marsh's ability to regenerate naturally within the preserve's historic footprint through the collection of sediment. Once completed, the vital project will provide a storm buffer for the historic and scenic George Washington Memorial Parkway, a natural filter to clean the Potomac River and habitat for a variety of plants and wildlife."

COE officials expect the breakwater construction to be completed in early 2019. Once the breakwater is finished,

work on marsh restoration will most likely commence, say NPS officials. COE contracted with a Gloucester, Virginia, company, Coastal Design and Construction, Inc., to do the work. In late July, there were eight barges and boats with three large cranes in the project area. The contractor will have seasonal, in-stream restrictions during breeding and nesting season from February 15 to June 20, 2019.

NPS received funding for restoration through a Hurricane Sandy mitigation grant. You can learn more at <http://www.nab.usace.army.mil/Missions/Civil-Works/Dyke-Marsh-Restoration/> and at <https://fodm.org/restoration.html>, FODM's website which has an extensive description of the project, its purposes and history.



Restoration contractors have brought barges, cranes and boats to work in Dyke Marsh. Photo by Glenda Booth

Meet the Plants of Dyke Marsh - Virginia Dayflower

BY PATRICIA P. SALAMONE



Virginia dayflower. Photo credit: R.W. Smith, Lady Bird Johnson Wildflower Center.

The blooms of Virginia dayflower (*Commelina virginica*) aren't showy, but they are still worthy of notice because of their appealing shape and their beautiful blue color, a rarity in nature.

Virginia dayflower is a perennial herbaceous plant, growing to a height of 1 to 3

feet. It is in the spiderwort family (*Commelinaceae*).

The veined leaves are lance-shaped, up to five inches long and about 1½ inches wide, narrowing to a pointed tip. They alternate along the stem and have striped sheaths about an inch long. The undersides of the leaves have short white hairs.

The flowers, about an inch wide, appear from May through October. Each flower lasts less than a day (hence the common name), typically opening in the morning and wilting by the afternoon. The flowers have three petals, with the two upper petals being slightly larger than the lower one. The petals are almost circular and have ruffled edges. The flowers have three fertile stamens, three infertile stamens with bright yellow anthers, and a pistil.

Virginia dayflower is native to most of the eastern U.S., as far north as New York State and as far west as Nebraska and Texas. It prefers shaded, wet places such as swamps, riverbanks, and bottomlands. Its National Wetland Indicator Status for the Atlantic and Gulf Coastal Plain region is facultative wetland (FACW): usually found in wetlands but occasionally grows in uplands as well.

The Asiatic dayflower (*Commelina communis*) can also be found in Dyke Marsh. As its common name implies, this plant is not native to the U.S.; it was probably brought into the country for horticultural use. Like its American relative, the Asiatic dayflower has three petals; the two large upper petals are a deep true blue and the very small lower petal is white. This trait inspired the genus name *Commelina*; Linnaeus named the plant for Dutch botanists Jan and Caspar Commelijn, who are symbolized by the two large petals.



Asiatic dayflower. Photo credit: Robert H. Mohlenbrock, hosted by the USDA-NRCS PLANTS Database / USDA SCS. 1989.

The Virginia Department of Conservation and Recreation (DCR) classes Asiatic dayflower as an invasive plant in all three regions of the Commonwealth (mountain, Piedmont, and coastal); it adapts to a wider range of conditions than the Virginia dayflower. However, it is assigned an invasiveness rank of "low", meaning that the species "poses a low threat to native species, natural communities, or the economy." So if you see it, enjoy its blue flowers without too much guilt—but I wouldn't suggest planting it in your garden.

For another perspective, see The New York Times story "The True Blue Asiatic Dayflower" at <https://www.nytimes.com/2017/09/20/nyregion/the-true-blue-asiatic-dayflower.html>

You can find the Virginia DCR's full list of Virginia's invasive plants and other useful information at <http://www.dcr.virginia.gov/natural-heritage/invspinfo>.

SURVEY (continued from page 8)



Russet-tipped clubtail (*Stylurus plagiatus*) - This dragonfly (female) has a very elongate abdomen, dark thoracic stripes and pale green thighs.

species surveyed in Dyke Marsh shown here:



Stream bluet damselfly (*Enallagma exulans*) - This damselfly likes moving waters and is often found along rivers. Both the male and female have a blue abdominal tip.

Order Your FODM Shirt

FODM will place an order for FODM shirts soon. They are dark green and have the FODM logo on them. If you would like one, please email Glenda Booth at gbooth123@aol.com by September 17. Please specify (1) your sex and size, (for example, men's large, women's small) (2) style preference (polo shirt or collar-less t-shirt) and (3) sleeve preference (long-sleeved, short-sleeved). The prices are as follows: polos, \$23; long-sleeved t-shirt, \$12; short-sleeved t-shirt, \$10. Please add \$4 for shipping if you want yours mailed. Otherwise, email Glenda to arrange pickup. Please send us your order for shirts by September 17th. Thank you.



Kayak in Dyke Marsh

The National Park Service will lead kayak trips in Dyke Marsh, departing from the Belle Haven Marina, on these dates: September 16, 23, 30; October 7, 14, 21 and 28 from 10 a.m. to 12 noon. Please arrive 20 minutes early. You can rent kayaks at the Belle Haven Marina, www.saildc.com/boat-rentals/general-information. To sign up, email Kelly_a_clark@nps.gov.



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

Welcome New FODM Members

New members: Celeste E. Baucom, Nick Bogdan, Betty Brown, Sylvia A. Cikins, Judy Coleman, Helen Grayson, Larry Grewelle, Judd Isbell, Frida Johansen, Elizabeth Jones, Kathy Lemmon, Helen Lewis, Stephen Matadobra, Lee McMillion, Tara Miller, Kathryn Pacious, Sue Slawson, Ty A. Turner, Katherine Weidenfeller, Chris Weis, Alison Yusufzai.

And a big welcome to our new **Life Members** Mark Robert Fracasso and Elizabeth Kiser and conversions to **Life Membership** Charles G. Jackson and Gary D. Knipling.

Calendar of Events

Most events do require registration. All are free. Check www.fodm.org or our Facebook page or email info@fodm.org for more information.



September 12, 7:30 p.m. FODM meeting. Dr. Desiree Naran-go discusses plants and wildlife. See article on page 1.

September 19, 2:30 - 5:30 p.m. Plant native plants. Meet at the site, Haul Road.

September 22, 12 noon - 3 p.m. National Public Lands Day Trash Cleanup. Meet at Haul Rd. entrance or Belle Haven Pk.

October 27, 9:30 a.m. Water Testing. Please send email to gbooth123@aol.com to sign up.

November 14, 7:30 p.m. FODM meeting. Brent Steury, NPS Resource Officer, discusses the Parkway's Natural Resources.

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 to join us.

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..... \$ _____
 ADDITIONAL CONTRIBUTION..... \$ _____
 TOTAL AMOUNT ENCLOSED..... \$ _____

NAME _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 TELEPHONE NUMBER _____
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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).

Dragonflies and Damselflies Surveyed in Dyke Marsh

BY GLENDA BOOTH

FODM volunteers are in their third year of surveying butterflies, dragonflies and damselflies. Dragonflies, in the Odonata order, have an outer skeleton, jointed legs and bristle-like antennae. Dragonflies hold their wings out to their sides; damselflies are usually smaller than dragonflies and usually hold their forewings and hind wings together over their backs. In warm months, dragonflies and damselflies can often be seen perching, patrolling and zooming around Dyke Marsh.

Pictured at right are some examples of dragonflies observed in Dyke Marsh this year:

Unicorn clubtail (*Arigomphus villosipes*) -- It perches low along the shoreline of a river or marsh and catches insects. This 2018 sighting was a first “voucher” or credible photograph record of this species for the GW Parkway.

Credit: Gary Myers

Needham's skimmer (*Libellula needhami*) – The male has an orange-red abdomen and a red face. Females are yellow and black. Both sexes and all ages have a black line on their abdomens and orange-tinted wings.

Credit: Glenda Booth

FODMer Ed Eder has photographed more examples of

SURVEY (continued on page 6)



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