

SINCE 1976

THE FRIENDS OF DYKE MARSH



FODM Quarterly Meeting

Wednesday, November 13, 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

Sunday morning bird walks will not be held from December 15 through 29 because of the National Audubon Society's and other area Christmas bird counts. See calendar on p. 7 and website at fodm.org for events and details

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Wildlife Conservation in a Changing World **Can Wildlife Adapt?**

On November 13, Dr. Sally Valdes will explore with FODM how climate change is affecting wildlife and offer some steps for addressing this threat.

Climate change is happening now. Even if we drastically reduce emissions soon, changes will continue into the future because greenhouse gases already emitted can stay in the atmosphere for decades. How will this affect wildlife? Can wildlife adapt? What can we do to help?

Climate change on its own, and in combination with other stresses, may push many species to their limits. Climate change can adversely affect wildlife, for example, when the life cycles of interdependent species get out of sync and when rising coastal waters flood nesting sites. Too little or too much precipitation can stress whole ecosystems.

Dr. Valdes has a Ph. D. in aquatic ecology from Cornell University with minors in natural resource policy and



A red fox searches for food on the ice at Dyke Marsh. Photo by Ed Eder

ecosystem ecology. She worked for almost 25 years as a biologist in several federal government agencies. Since retiring, she has taught an environmental health and a wildlife ecology class.

As a federal employee, Dr. Valdes served on an advisory group that developed the U.S. Geological Survey's National Climate Change and Wildlife Sci-**MEETING** (continued on page 7)

Second Phase of Dyke Marsh Restoration Project Underway

BY GLENDA BOOTH

Coastal Design and Construction, Inc., the Dyke Marsh restoration contractor, started the second phase of Dyke Marsh restoration in early fall, putting in marine mattresses for the base of a rock sill just north of the breakwater. The sill, built in an elongated horseshoe design, will have gaps so that water and aquatic organisms will flush in and out with the tides.

The breakwater and the sill will be completed by December 31, 2019, say National Park Service and Corps of Engineers officials. For more information on why Dyke Marsh is disappearing and the



The breakwater, which replicates the removed protective promontory, is nearing completion. Photo by Glenda Booth

restoration project, visit "Restoration" on our website, www.fodm.org.

FALL 2019

In Memoriam, John Andrews

FODMer John Marshall Andrews, age 86, passed away on September 10, 2019. John had a special tie to Dyke Marsh that we described in our winter 2017 newsletter.

He grew up near the marsh on H Street (New Alexandria) and as a youngster, paddled in the marsh, using a fivegallon empty can as a lifesaver. He recalled that Dyke

Marsh was "like the Everglades" and lamented the loss of frogs and their spring calls, saying, "It makes me sad not to hear them anymore. They were all over the whole place. It was unbelievable. I loved that. Spring was coming."

John was born in Alexandria on October 4, 1932. An engineer by talent and training, he John loved to hear frogs calling, like this northern green frog (*Lithobates clamitans melanota*). Males have a rubber-band-like "twang" call.

graduated from Virginia Tech, joined his father, Thomas, and brother in the construction business and worked largely in marine construction. A licensed tugboat captain and crane operator, he helped build the Belle Haven Marina with his father and owned and managed it for many years after his father's death. He was a resident of the River Towers Condominiums.

He loved sharing his photos and memories of Dyke Marsh and the local area from the 1930s, 1940s and 1950s. He helped put in plants in FODM's native plant area.

"As important as it is to change the lightbulb, it's much more important to change the policies." - Former Vice President Al Gore, MSNBC, Sep.19, 2019

Restoring A Stream

In 2015, people became alarmed by sediments that turned west Dyke Marsh orangey-brown during storms. FODM urged Fairfax County to analyze and fix the problem, a severely eroded, stormwater outfall and an area gouged out like a rugged canyon about



The gouged out stormwater outfall in Mt. Vernon Park.

tion project to stop the erosion

and stabilize the area. Today,

the restored area has a heavy

vegetative cover of native

plants, both planted and natu-

rally occurring, that are at-

tracting native insects, includ-

ing multiple species of butter-

flies. Even in a dry September 2019, some areas were

moist and spongy and a few

cattails have appeared. There

are also plants like Bidens,

winterberry, wood ferns, false

one-half a mile upstream from west Dyke Marsh in Mount Vernon Park, in an unnamed, intermittent stream. Fairfax County officials said that the eroded channel was 13 feet deep, over 50 feet wide and 200 feet long.

In 2016 and 2017, the county started a stream restora-



Rock steps and pools installed slow the stream.

nettle and greenbrier and trees like sumacs, sassafrass, tulip poplars and white oaks. "It is now a wetland complex instead of an outfall channel," remarked Meghan Noe Fellow with Fairfax County, on September 10, 2019 walk.

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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 are often reminded that the Dyke Marsh Wildlife Preserve offers something for everyone.

On October 1, eight third-graders

plained zonation of

ting a rough green

snake, he said that

snakes use their

tongues to smell

(photo, right). He urged students to

sniff a daddy long-

legs spider which

makes a repellent,

acetone scent. He

said that humming-

birds like the or-

ange-yellow blos-

Spot-

vegetation.

and four moms from Girl Scout Troop 53003 came to Dyke Marsh to learn about water quality. They eagerly collected trash, especially small pieces, along the shoreline. On the same afternoon, Dr. Edd Barrows brought ten Georgetown University forest ecology students to Dyke Marsh.

Dr. Barrows, Professor of Biology, explored the flora, fauna, processes and ecosystems of Dyke Marsh's floodplain forests. At the bridge past the "dogleg" turn, he ex-



Dr. Barrows said that about 20,000 species of Archaea, Bacteria and Eucarya occur in Dyke Marsh habitats Photo by G. Booth

som of jewelweed and that black swallowtail butterflies nectar on plants in the parsley family. He discussed the emerald ash borer infestation that is killing ash trees, plus cattails, arrow arum, marsh mallows, fall asters and cedar trees and how it's all inter-related.

Fall Migration

Fall migration is still occurring and Dyke Marsh is a stopover site for many species. "Nowhere in North America are the annual migrations of birds, butterflies and dragonflies played out on such a vast scale as in the mid-Atlantic

Perseverance

"Environmental work takes a long time. I think people who are involved in nature live longer, just like maestros and architects, because it takes a long time to get things done and it gives you a will to keep going."

"The environment is not a special interest, not like an art museum or one's university. Taking care of the only home we have is in everyone's vital interest. We are all, by definition, environmentalists. Or should be."

-- Brenda Shapiro, Philanthropist

region," says the National Audubon Society's Field Guide to the Mid-Atlantic.

"Migration evolved as a way for birds to exploit resources that are seasonally abundant and avoid times when or places where resources are scarce or weather is very harsh," wrote Paul Kerlinger in How Birds



A rough green snake (*Opheodrys aestivus*) sniffed with its tongue. Photo by Glenda Booth

Migrate. Some say that with less submerged aquatic vegetation, waterfowl numbers may be low this year. With the new breakwater, we could see some uncommon species perched or poking around the rocks.

Kudos for Volunteers

George Washington Memorial Parkway Superintendent Charles Cuvelier recently commended FODMers for their volunteerism. As of October 3, FODMers gave 1,663 volunteer hours in 2019. Among other projects, these numbers represent 88 hours of invasive species control, 108 hours for Lepidoptera and Odonata surveys, 155 hours for the breeding bird survey and 128 hours for 39 bird walks. In 2018, for the entire parkway, people volunteered 24,557 hours, which the National Park Service (NPS) values at \$624,000. Thank you, FODMers! In these difficult times, NPS needs us and we need to do our part.

Your Civic Duty

Speaking of stepping up, please vote on November 5. Virginians will elect the entire state legislature, both the Senate and House of Delegates, as well as many local officials. While Dyke Marsh is federal property, what happens at the state and local level matters too. For example, to start restoration, the Park Service had to get permits from both Fairfax County and the Virginia Marine Resources Commission. Local governments address stormwater runoff. States regulate pollution and discharges into water. To what's ballot, visit learn on vour https:// www.elections.virginia.gov/casting-a-ballot/candidate-list/.

The Virginia Conservation Network (www.vcnva.org) has published a briefing book, titled, "Our Common Agenda," which outlines state conservation priorities, issues that the 2020 Virginia General Assembly will likely tackle.

Glenda C. Booth

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

FODM Weighed in on GWM Parkway Safety Study

The National Park Service (NPS) is conducting a safety study of the south segment of the George Washington Memorial Parkway. After a July 11, 2019 public meeting, NPS had a public comment period which ended on August 21. NPS will hold at least one more public meeting on possible options. FODM submitted the following comments.

The NPS Mission

It is always useful to review the National Park Service's plans and actions in the context of the agency's mission:

"The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural



Scenic view of the stone bridge in spring. Photo by NPS

resource conservation and outdoor recreation throughout this country and the world."

From the Organic Act of 1916: To "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Former U. S. Department of Interior Secretary Dick Kempthorne further stated in a June 19, 2006 proclamation, "When there is a conflict between conserving resources unimpaired for future generations and the use of those resources, conservation will be predominant."

The parkway's 2014 Foundation Document on page 14 states, "In a world of diminishing biological diversity and threatened natural resources, George Washington Memorial Parkway preserves islands of refuge in an urban environment and provides opportunities to make the public aware of the importance of the values and issues relating to these islands."

FODM Comments and Recommendations

The Friends of Dyke Marsh share the following concerns and recommendations:

Maintain Its Historic Character

Congress authorized the construction of the Mount Vernon Memorial Parkway to celebrate the bicentennial of George Washington's birth. The first segment was completed on time in 1932. The Parkway is listed on the National Register of Historic Places.

The Parkway's planners envisioned a unique roadway to preserve and enhance the Potomac River valley, to keep the shoreline in public ownership and to honor Washington by creating a grand gateway to his home, Mount Vernon, at the road's southern terminus. Lt. Col. Peter Hains, who conducted the first land survey told Congress that the parkway should "have the character of a monumental structure, such as would comport with the dignity of this great nation . .. and the grandeur of char-



The parkway retains its historic character with four lanes. Photo by G. Booth

acter of the man to whom it is dedicated. . . It should be such a work as no American need feel ashamed of "

Recommendation: Maintain the parkway's historic character. Widening the road by, for example, creating more lanes could impair its historic character.

Keep It Green

Congress and the parkway's planners intended that NPS feature natural areas, preserve scenic vistas, integrate the road's design with the undulating terrain, follow natural

contours and have gentle curves.

To highlight its natural features, signs and lights are minimized; billboards are barred. Most of the bridges consist of reinforced faced concrete with hand-laid. stone rough-cut for a natural look. Over 250 000



Green spaces and beautiful landscaping are a feature of the GWM Parkway. Photo by Glenda Booth..

trees, shrubs and vines have been planted over the years. The parkway's natural areas are especially rich in biodiversity for an urban park, as documented at www.nps.gov/

gwmp. The parkway is a road within a park. Despite management efforts, non-native plants comprised at least a disturbing 29 percent of the total several vears ago.

GWMP has an extensive planting plan, first created in 1931, designed to keep it "green" consistent with Congress's and the planners' intent. GWMP's 2014 Foundation Document indicates a need for planting more appropriate vegetation for shoreline stabilization and for both shoreline and vegetation management plans.

Recommendation: Fully implement the planting plan, plant more native trees and plants and expand invasives COMMENTS (continued on page 5)

COMMENTS (continued from page 4)

species control. Some areas of the parkway, including some parts of the Dyke Marsh Wildlife Preserve, represent some of the Washington, D.C.-area's last, surviving biodiversity as sprawl and development continue to destroy more native habitat.

Increase maintenance staff to manage vegetation so that it does not impair drivers' visibility and vehicles' turning.

Ensure that a biologist or tree expert evaluate the options for any diseased or dead trees if maintenance personnel are considering destroying trees. Plant at least two trees for every tree that GWMP cuts down or impairs.

Do not widen the road. Widening it could destroy and harm habitat.

Save Dyke Marsh

As documented by two U.S. Geological Survey studies, Dyke Marsh will be gone by 2035 without action. USGS concluded that the marsh is losing 1.5 to two acres a year and the rate of erosion is accelerating. Fortunately, GWMP prepared an environmental impact statement and restoration plan and restoration efforts are underway.

Recommendation: Do not implement any changes that



will contribute to or exacerbate the erosion of Dyke Marsh, such as destroying trees and expanding impervious surfaces that increase the volume or velocity of stormwater runoff.

Protect Wildlife

Wildlife like turtles, deer and raccoons crossing the parkway can be a safety hazard.

Dyke Marsh along the parkway. Photo by Glenda Booth

Vegetation and natural habitat are an integral part of the parkway and reflect designers' intent. Inevitably, this habitat attracts and is home to wildlife, wildlife that does not "respect" human-created boundaries or infrastructure.

Recommendation: Evaluate the feasibility and implications of creating wildlife passageways under the parkway, such as those constructed on Fort Belvoir and some interstate highways.

Enforce anti-littering laws. Food wrappers, scraps and other litter attract birds and other wildlife.

Reduce Speeding

NPS's 2019 statistics show that from 70 to 85 percent of drivers speed on the south parkway which creates many dangers to vehicles, bikers, walkers, vegetation and wildlife. The GWMP 2014 Foundation Document states, "Speeding is a problem."

Speeding can also create a hazard to people visiting Dyke Marsh when they are crossing the parkway on foot, turning their vehicles or bicycles onto Marina Road or onto the parkway.

The parkway was designed to be a slow-speed thoroughfare, an array of units combining the natural, historic and recreational sites with over 7,000 acres of parkland along its 40 miles mostly paralleling the Potomac River shoreline. The first part built, the pre-World War II, the Mount Vernon Memorial Parkway, was designed for vehicles to travel at 35 to 45 miles per hour.



Southern part of the parkway around 1946. Photo by NPS

tion: Do not increase the speed limit. Increase enforcement of speed limits with more patrols and with speed cameras mounted in a way compatible with the natural and vegetated areas of the parkway.

Reduce Noise

Recommenda-

Noise from vehicles, boats, airplanes and human activity have adverse environmental impacts all along the parkway.

The NPS Natural Sounds and Night Skies Division (https://www.nps.gov/subjects/sound/effects_wildlife.htm) website examines the impact of noise on parks' wildlife and states,

"In general, a growing number of studies indicate that animals, like humans, are stressed by noisy environments (Shannon et al. 2015) ... When these effects are combined with other stressors such as winter weather, disease and food shortages, sound impacts can have important implications for the health and vitality of wildlife populations within a park (Ware et al. 2015).

"These findings are especially significant because national parks are under increasing noise pressure. Noise levels in park transportation corridors today are many times the natural level (Mennitt et al. 2015). Air transportation can



A concern of the original design of the parkway is at-grade crossings and limited sight-lines. Photo by NPS

also affect life on the ground. . . The result is as much as a 70% reduction in the size of an area in which predators can hear their prey (Barber et al. 2009). Increasingly, careful consideration of the impacts of human-generated noise on wildlife is a critical component of management for healthy ecosystems in our parks.

"Reducing speed limits on roadways and increasing enforcement of speed limits is often the most effective and cost-efficient means of reducing noise. For example, reducing vehicle speeds from 40 to 30 mph is as effective as removing one half the vehicles from the roadway."

COMMENTS (continued on page 6)

Two New GWMP Employees

Suzanne Bouchard is the George Washington Memorial Parkway's (GWMP) new horticulturist. She manages the park's horticulture program, including the National Mall's elm and cherry tree propagation effort and revitalization of the parkway's historic planting plans. She helps FODM with our native plant site.

Suzanne previously worked for Alexandria's Department of Recreation, Parks and Cultural Activities on landscape renovations, native plant expansion and community gardens. She began her career at Mount Vernon Estate and Gardens as a gardener and greenhouse operator. Then, Su-



Suzanne Bouchard. Photo courtesy of S. Bouchard

zanne worked for the U.S. Department of Agriculture's Natural Resources Conservation Service as a soil scientist where she conducted field research and mapping for soil surveys.

Suzanne brings more than ten years of experience in ornamental horticulture, landscape preservation and soils to the GWMP. She is a certified horticulturist with the Virginia Nursery and Landscape Association

and has a Bachelor of Science in plant and soil science from the University of Kentucky.

COMMENTS (continued from page 5)

Recommendation: Do not increase speed limits or make road surface or other changes that increase noise. Enforce speed limits.

Stormwater

During heavy precipitation events, stormwater can create large puddles on the road's edge, requiring vehicles to slow down. Spray from vehicles passing through these puddles can impair drivers' visibility.

Recommendation: Prepare options for addressing measures to reduce puddling during heavy downpours, but avoid solutions that could cause more erosion in Dyke Marsh or other shoreline areas. Consider approaches that retain rainfall onsite. Forested areas, for example, can be effective in retaining stormwater.

Reduce Light Pollution

Currently lighting along the parkway is minimal, consistent with its design. At night, human-caused light can adversely affect many wildlife species. Some argue that, for example, female fireflies are unable to see the male firefly flashes. Artificial light can attract and disorient moths, frogs, birds and hatching turtles and can lead to habitat loss if the light serves as a barrier to some species such as rodents and bats.

Recommendation: Do not increase lighting.

Mireya Stirzaker

is the new Natural Resources Specialist at the GWMP. She is helping FODM with invasive plants.

Mireya previously worked for the Parkway as an interpretative ranger in Haleakala National Park and was a volunteer assistant biologist for GWMP's Resource Management division,



Mireya Stirzaker. Photo by National Park Service

working in the insect lab and in the field performing specimen collection, invasive plant management and deer surveys. Mireya had an AmeriCorps internship with the U.S. Geological Survey (USGS) working on phenology, remote weather stations in Shenandoah National Park and data collection procedures for citizen scientists. She was a research assistant for George Mason University's Department of Environmental Science and Policy working on macrophyte studies in the Potomac River and she worked on water problems in the Yunnan province of China.

Before NPS, she worked in the private sector. Mireya earned her bachelor's degree at James Madison University and her master's degree in natural resources from Virginia Tech. She is a certified Virginia master naturalist, volunteer stream monitor for the Reston Association and a singer with The Reston Chorale.

Resiliency Planning, Shoreline Flooding

During some storms, sections of the parkway along the Potomac River act as "dams" and can help block flooding of the parkway and upland areas. However, storms, tides and flooding are natural events and rivers need floodplains and wetlands to help absorb floodwaters. Climate change is resulting in more frequent and more severe storms and more flooding. Development and human disturbance have modified many natural processes.

Recommendation: Identify upland areas for wetland migration and floodplains. Complete the restoration of Dyke Marsh.

Fort Belvoir Traffic

There is anecdotal evidence that because of the 2005 the Base Realignment and Closure Commission (BRAC) actions which added hundreds of new jobs to Fort Belvoir, traffic volume increased significantly on the south parkway because of employees going to and from work there.

Recommendation: Ask the Department of Interior officials to work with Department of Defense officials to create more transportation options for Fort Belvoir employees. Support extending the Metro subway lines to accommodate Fort Belvoir employees. Urge the Trump Administration to advocate for increased Metro subway funding to extend subway lines and shuttle buses to Fort Belvoir to reduce traffic on the parkway.

Volunteers Haul Out 44 Bags of Trash

On September 28, volunteers cleaned up the Dyke Marsh shoreline from kayaks and canoes and collected 44 bags of trash. The event was sponsored by FODM, the Northern Virginia



Northern Virginia Volunteers. Photo by Ned Stone. Conservation Trust and the National Park Service.

MEETING (continued from page 1)

ence Center and was responsible for integrating climate change concerns into environmental reviews of proposed federal projects.

This free, public program will be at 7:30 p.m. at the Huntley Meadows Park Visitor Center, 3701 Lockheed Boulevard, Alexandria, VA 22306, preceded by an informal social at 7 p.m. If you use a GPS device, be sure to enter the street address, not the park's name.

The Faith Alliance for Climate Solutions, the Friends of Huntley Meadows Park and the Friends of Little Hunting Creek are cosponsors.

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.

Welcome New FODM Members

FODM welcomes our **new members** Jeff Cook, Kurt Skolnick Hess, John Kennedy, Karen Niersbach and Steven Sprague. Welcome **new Life Members** Robert H. Dugger, Claudia Metter and Clint Robinson and our newest conversions to **Life Membership** David Barbour and Marc Bendick.

Calendar of Events

November 2 - Dyke Marsh West Cleanup. Join FODMers at 9 a.m. in west Dyke Marsh, behind the River



Towers condos. Check our website and Facebook for details. November 16 - Mount Vernon District Environment Expo 8 a.m. at Walt Whitman Middle School. See details below. December 14 - Audubon Christmas Bird Count in areas inside

the Beltway and south of Alexandria. To volunteer contact Larry Cartwright at prowarbler@verizon.net.

Environment Expo November 16

Supervisor Dan Storck's 2nd Annual Mount Vernon District Environment Expo at the Walt Whitman Middle School, Parker's Lane Alexandria on Saturday, November 16, 2019, 8 a.m. to noon. The goal of this



event is to educate and inform local residents on environmental challenges of climate change, including ones that are unique to the Mount Vernon area given our proximity to water and the many industrial facilities nearby.

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

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
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Please address any questions or comments about <i>The Marsh Wren</i> 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).

Meet the Plants of Dyke Marsh - Goldenrod

BY PAT SALAMONE

I can't imagine fall in our area without goldenrods. They seem to be everywhere (they love roadsides and other open areas). Their golden color brightens up the shortening days, and they hum with late-season pollinating insects.

Goldenrods (*Solidago* spp.) have composite flowers and thus are in the aster family (*Asteraceae*). The genus name, *Solidago*, is derived from the Latin solidare, "to make whole," in reference to the medicinal uses of some goldenrod species.

It's usually easy to recognize a goldenrod, but not so easy to identify it. There are more than 100 species in the genus, most of which are native to North America. Approximately 38 varieties are native to Virginia. Many species look alike, and goldenrods also hybridize readily. In its write-up on common goldenrod

Common goldenrod with insects. Photo by R.W. Smith, Lady Bird Johnson Wildflower Center

(Solidago altissima), North Carolina State University's North Carolina Extension Gardener Plant Toolbox says it

best: "This plant may be confused with: Any other goldenrod species *Solidago* spp."

Even so, there are two species that I can confidently say are found in Dyke Marsh, because they were planted in the native plant restoration area along the Haul Road trail: *Solidago altissima* and *Solidago juncea*. *Solidago juncea* is one of the earliest goldenrods to bloom and *Solidago altissima* is one of the latest, so the combination produces a long season of beautiful blooms.

Goldenrod flowers are rich in nectar and thus are a particular boon to insect pollinators late in the year when not much else is blooming except for the asters. These insects then carry the sticky yellow pollen to other plants, and the flowers ripen into fuzzy, lightweight seed heads that are carried away by the wind to start new plants.



The Friends of Dyke Marsh P.O. Box 7183 Alexandria, VA 22307-7183