The Marsh Wren

SINCE 1976 | THE FRIENDS OF DYKE MARSH | SPRING 2024

FODM 2024 Member Meetings

May 15, 7 p.m., Zoom (p. 1)
October 7, 7 p.m., Zoom

Calendar of Events

June 29, 10 a.m., Ecology Walk
August 17, , 10 a.m., Butterfly Walk
August 25, 7:30 p.m., Bat Walk
September 14, 1 p.m., Raptor Rapture, Fort Hunt Park
October 21, 1 p.m., Fall Colors Walk

Every Sunday, 8 a.m., Bird Walk
Twice a month, Invasive Plant Control

Check www.fodm.org for details.

CONTENTS

Tantalizing Turtles

May 15, 7 p.m. FODM Zoom Program

Woodland box turtle (*Terrapene carolina carolina*)
Photo by Ty Karlovetz National Park Service

Join the Friends of Dyke Marsh on May 15, 7 p.m., for a Zoom presentation on turtles by Dr. Matt Close, Associate Professor, Radford University's Biology Department.

Dr. Close will describe common species in the state, their behavior, needs and threats and offer some suggestions on how to better preserve and increase their populations.

Turtles, tortoises and terrapins have been on Earth for 220 million years. Long-lived reptiles, their bodies have scales and they produce eggs. Virginia has at least 24 turtle species. Dyke Marsh has at least seven species.

Dr. Close is also treasurer of the Virginia Herpetological Society (VHS). VHS's mission is to advance the conservation, education and research of Virginia's native herpetofauna.

A long-time Virginia resident, Dr. Close first worked with reptiles and amphibians as a student at Old Dominion University, continued with herpetological field work for the Maryland Department of Wildlife Resources Natural Heritage Program and then went on to study Integrative and Comparative Biology at Lehigh University for his Ph.D. He is a functional morphologist who has studied reptile and amphibian anatomy and behavior for over 15 years and has been teaching Appalachian herpetology, comparative anatomy, histology and human anatomy and physiology at Radford University since 2014.

Please register here or at www.fodm.org, top left of the home page.

The Friends of Little Hunting Creek and the Friends of Mason Neck State Park are cosponsoring this program.

George Washington Memorial Parkway Superintendent's Message

BY CHARLES CUVELIER

Congratulations to FODM's returning and new board members. We appreciate your support as volunteers and as leaders. In February 2024, we signed a new five-year agreement with FODM. Written agreements are our expression of and commitment to partnerships in the National Park Service. Thank you for your continued support of the park.

Vessel abandonment is an ongoing challenge for the park. There are three vessels at Belle Haven Marina and one at Columbia Island Marina to remove. Our efforts to locate and hold the owners responsible so far have not been successful. The park will need to remove them at our expense with a contracted vendor. We are developing a solicitation package. With six months left in the fiscal year and Congress just recently passing the budget, it is uncertain whether we will issue the contract this year. The submerged vessels have been checked and do not pose an immediate environmental risk.

We anticipate awarding a contract to replace the drinking water fountain at the Peter Webster Memorial on the Mount Vernon Trail near the Alexandria Avenue bridge. We are using this as a pilot to explore replacement of additional fountains on the trail in the future. This includes efforts to compete for funding through special initiatives from our official nonprofit partner the National Park Foundation.

We are working with our partners at the Army Corps of Engineers to secure a permit from the Virginia Marine Resources Commission. The permit and contract award administered by the ACOE would address settlement of the rock sills that we have observed. The sills are part of the marsh stabilization project. We expect to add rock material without exceeding the original height of the sills. We completed the stabilization project in 2022.

Charles Cuvelier
Photo by National Park Service

Rock sills built as part of the marsh stabilization project
Photo by Glenda Booth

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Board members can receive emails at info@fodm.org. *The Marsh Wren* is a 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 post office or email address at the left.

President's Message

Glenda C. Booth, President, Friends of Dyke Marsh

The lifeblood of FODM is our dedicated volunteer cadre, people who help Dyke Marsh thrive and survive. Volunteering supports the environment and it boosts physical and mental health, increases longevity, combats loneliness and enhances self-esteem, among other benefits. Let us know what you can do or contact me to learn about opportunities.

We are heartened by the three active bald eagle (*Haliaeetus leucocephalus*) nests and a new nest on the west side of the GW Memorial Parkway. This spring, people were captivated by a great horned owl (*Bubo virginianus*) pair, but by March 27, they appear to have abandoned their nest. Expert birder Larry Cartwright speculated, "Infertile eggs, embryonic or nestling mortality or too many people at the nest site taking photos could be factors." FODMers observed a barred owl (*Strix varia*) pair too, but as of this writing, no one has confirmed a nest.

Generous Grantors

We are very grateful to three organizations that awarded FODM grants:

- Virginia Lakes and Waters, $3,500 for a sign to explain the marsh restoration-stabilization project
- Wetlands Watch and the Virginia Outdoors Foundation, $3,250 to plant black willow trees in the tidal zone
- Dominion Energy Charitable Foundation, $5,000 to reprint our seasonal brochures and children's materials

Help Document Changes

We send our appreciation to Jim Gearing and Bernie Krell for re-installing our second Chronolog station, DMW102, on the Haul Road trail overlooking the marsh, near the bridge east of the dogleg turn. At these stations, visitors can document landscape changes over time, changes that occur slowly.

At the stations, align your smartphone in the bracket and take a photo. Then e-mail the photo to upload@chronolog.io with the station location as the subject line. Chronolog will reply and include a link to the time lapse series. FODM and the National Park Service (NPS) will not collect or ever see your e-mail. View photos at https://www.chronolog.io/. Station DMW101 is at our native plant site. Search by station number.

By early May, bridge 23 construction across from Tulane Drive should be completed. We thank NPS for not expanding the current footprint of the supporting piles, though they did widen the deck. We also thank them for delaying construction last summer to protect the barn swallows (*Hirundo rustica*) that built a nest and raised young under the bridge. We hope the new bridge means yet more barn swallow and eastern phoebe (*Sayornis phoebe*) nesting "habitat." We are still hoping NPS will conduct a speed study of users on the Mount Vernon Trail.

Other "infrastructure" news: Thanks to NPS for repairing the ramp to the boardwalk that a storm upended. Thanks to the Belle Haven Marina team for removing the boat grounded in Dyke Marsh in January by a storm. We've again urged NPS to remove the sunken boats in the marsh and to post a sign indicating that jet skis are banned in Dyke Marsh.

Wetlands Decline

Wetlands covered less than six percent of the lower 48 states in 2019, half the area they covered since the 1780s, concluded a March U.S. Fish and Wildlife Service (FWS) report. Loss rates have increased by 50 percent since 2009 and without protection, losses will likely continue.

Noted the FWS press release, ". . . wetland loss has disproportionately impacted vegetated wetlands like marshes and swamps. The rapid disappearance of vegetated wetlands between 2009 and 2019 has resulted in a loss of 670,000 acres, an area approximately equal to the land area of Rhode Island."

Why? FWS attributes losses to development, upland planted forests and agriculture. "However, other drivers also likely contributed to the loss, including climate change and sea level rise, especially along the coasts. . . Conserving and restoring vegetated wetlands will be critical to addressing climate change and threats to biodiversity," they say. Visit https://www.fws.gov/project/2019-wetlands-status-and-trends-report.

To keep up with rising costs, we will raise annual household dues from $15.00 to $20.00 effective July 1, 2024. You will get a notice when your membership expires.

Chronolog station on the Haul Road trail Photo by Jim Gearing

Flooding in Dyke Marsh's Future? A Race between Sea Level and Land Elevation

BY STACY LANGSDALE

If you've walked Haul Road trail after January 9, you likely noticed some significant damages that a major storm left in its wake: lots of flotsam and jetsam covering the path, the wooden ramp to the boardwalk displaced an estimated 30 feet and a marina sailboat washed ashore. Will this happen more frequently due to rising sea levels? The answer is complex, but fortunately the news isn't all bad and the construction of the breakwater and sills may help.

Haul Road trail with damage from a January 2024 storm, flotsam washed up and a displaced ramp to the boardwalk Photo by Stacy Langsdale

Sea Level Rise, Subsidence and Land Elevation

In the Washington, D.C., region, sea level increased 13.5 inches in the last 100 years (averaging 3.43 millimeters a year). However, the rate of change was fastest in recent decades so we can expect more rapid changes moving forward. Curiously, sea levels actually vary throughout the year, being highest in September, which overlaps with hurricane season, making the area particularly susceptible to flooding around that time (NPS undated; Tredennick et al 2023).

However, while sea level rise has received most of the attention, subsidence can be a more pressing issue in some localized areas, even tripling estimates of potential flooding (Ohenhen 2024). "Subsidence" is downward vertical land movement and is common in many areas on the U.S. east coast. An extreme, local example of subsidence is at Washington's Tidal Basin, where the seawalls just west of the Jefferson Memorial have sunk as much as five feet since their completion in the 1940s (see photo). However, this sinking happened largely because they were constructed on fill material and not anchored to bedrock.

A person stands on the sunken seawall at the Tidal Basin in March 2024. Photo by Stacy Langsdale

Why Be Concerned?

Researchers found that sea level is rising relative to land elevation for most of the U.S. east coast with few exceptions. This is creating several troubling changes. The most sensitive signal is observed within the various plant communities. As we learned from Nelson DeBarros at our March 3 annual meeting, the many different plant communities found in the marsh and its adjacent uplands are adapted to very specific tidal conditions. Small changes in water levels (without comparable land accretion)

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can trigger species die-off, eventually converting the marsh into submerged mudflats. Dyke Marsh is a rare freshwater marsh with low salinity (because freshwater from the upper Potomac floats above the denser seawater from the lower Potomac), so while not a current concern, most coastal areas also have the concern of saltwater intrusion. The changes in water levels and salinity can result in "ghost forests," destroy agricultural lands and contaminate wells. Coastal habitats such as marshes serve an important role in reducing flooding. They can buffer storm energy and act as "sponges" that absorb water. Losses in these habitats then leave their adjacent uplands more vulnerable to flooding from high tides and storms. Ohenhen et al. (2024) studied sea level rise combined with vertical land movement along the entire eastern United States and found the increased risk could affect over two million people and is a major threat to metropolitan cities which directly intersect with the rising seas.

Subsidence and Accretion in Marshes

The good news is that marshes can fare better than forests and agricultural lands, as long as they are in a waterway that brings an ample supply of sediment (soil material – think muddy river water). When river water flows through the shallow marsh, it may slow down enough to drop sediment or any materials that it is carrying. (This same effect is responsible for transporting and leaving behind all the flotsam on Haul Road trail.)

Is Dyke Marsh Keeping Pace with Sea Level Rise?

The National Park Service (NPS) monitored elevation and accretion rates at nine sites in the marsh between 2006 and 2019. The researchers found elevation to be the most useful indicator, as it combines subsidence, accretion and erosion processes all together to be a more direct indicator for calculating shifts in water levels in the marsh. Tredennick et al (2023) analyzed this data and found that the sites in and near the Potomac River did increase in elevation faster than sea level rise; however, the sites along the interior creek (generally across from Tulane Drive) did not.

Another factor that affects marsh condition is shoreline erosion. While erosion was not specifically measured in the study, the fact that half of the monitoring devices (surface elevation tables or SETs) washed away is rather telling (Tait 2023; Tredennick et al 2023). In 2023, NPS installed equipment at 12 new randomly-selected monitoring sites to better represent the larger marsh area (Campbell, 2024; Tait 2023). On March 27, NPS emailed that they will monitor these SETs for the first time in April 2024.

NPS field crew installing new SET benchmarks in the Dyke Marsh Wildlife Preserve

Photo by Galen Oettel National Park Service

Photo by Lindsay Ashley National Park Service

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Restoration Activities: Breakwater and Rock Sills

The Corps of Engineers built a breakwater (in the distance) to replicate a former promontory and five stone sills (foreground) for further protection.

The good news is that with the support of FODM and a "Hurricane Sandy" grant, NPS built stabilization structures that may help slow erosion and increase accretion in the marsh, enhancing the chances it can compete with sea level rise. In 2020, the National Park Service and U.S. Army Corps of Engineers constructed a 1,500-foot-long (about one-third mile) breakwater at the southern end of the marsh. This breakwater is designed primarily to reduce erosion from hurricanes. Then, in 2022, NPS added a series of rock sills north of the breakwater on the eastern edge of the marsh to buffer against storms, stem erosion and encourage accretion in the marsh. The new monitoring efforts will hopefully evaluate the effectiveness of these barriers over the coming years and decades.

These studies focused on the health of the marsh itself, but what about along the trail? Perhaps it will be prudent to check the tide charts and wear water-resistant hiking boots for future walks along the Haul Road trail.

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Help a Turtle Cross the Road

BY MOLLY KIRK, Editor ***This article is reprinted with permission from the March-April 2024 Virginia Wildlife magazine.***

What do you do if you're toodling down a back road and see a turtle crossing in the lane of traffic? As the weather warms up in the spring, turtles start to move around, looking for food, territory, mates, and nesting locations. Sometimes, roads are in their path, and they risk being hit and killed by motor vehicles. Deaths to adult turtles can negatively impact the local population at a much larger scale relative to many other species, mostly because turtles are slow to grow to reproductive maturity. When a high number of breeding adults disappear, population declines and localized extinction are likely to follow in future years.

- Make sure you're helping safely. Pull off to the side of the road in such a way that doesn't impede traffic or jeopardize your safety or the safety of others. Keep an eye out for oncoming traffic.
- Use care when moving the animal. Depending on what species it is and if it's injured, it could bite. If you can, it's best to simply stop traffic to allow the animal to cross on its own. Don't pick up the turtle by the tail.
- Don't divert the turtle. If you determine the animal needs help crossing, move it to the side of the road where it was headed.

Even if you perceive a turtle to be in a bad location, do your best to relocate it as little as possible. Turtles are creatures of habit that make similar movements to the same places year after year and generally have a very small home range. "I always tell people to treat a turtle the same way they would want someone to treat their great-grandmother when she is crossing the road," said DWR Watchable Wildlife Biologist Meagan Thomas. "Would you want them to safely stop their vehicle and assist her to the other side of the road? Or would you want them to put her in their car and drive them 20 minutes down the road to a neighborhood pond where they let her go?"

For the story on how a group of conservationists helped seasonally close a road frequently used by turtles, read: virginiawildlife.gov/blog/Jamestown-turtle-road.

Virginia's Tidal Marsh Inventory at Dyke Marsh

BY KAREN DUHRING, Coastal Scientist, Virginia Institute of Marine Science (VIMS)

Round 1: Putting Tidal Marshes on the Map

When the Friends of Dyke Marsh organization was formed in 1976, VIMS scientists were busy mapping tidal marshes throughout coastal Virginia for the first time. The VIMS Tidal Marsh Inventory, or TMI, is an ongoing effort over the past 50 years to map and characterize coastal marshes throughout Virginia. This unique mapping program is managed by the Center for Coastal Resources Management at the Virginia Institute of Marine Science (VIMS-CCRM).

The first Tidal Marsh Inventory report for Fairfax County (1976) includes a summary description about Dyke Marsh and Hog Island. More than half of Dyke Marsh was dominated by cattails at the time with other locally abundant plant species found in lower elevation marshes. The percent cover of observed plants in individual marsh areas was reported. A noticeable loss of tidal marsh area became evident by comparing the 1976 map with 1937 aerial photographs. The value of tidal forests adjacent to these marshes was also highlighted.

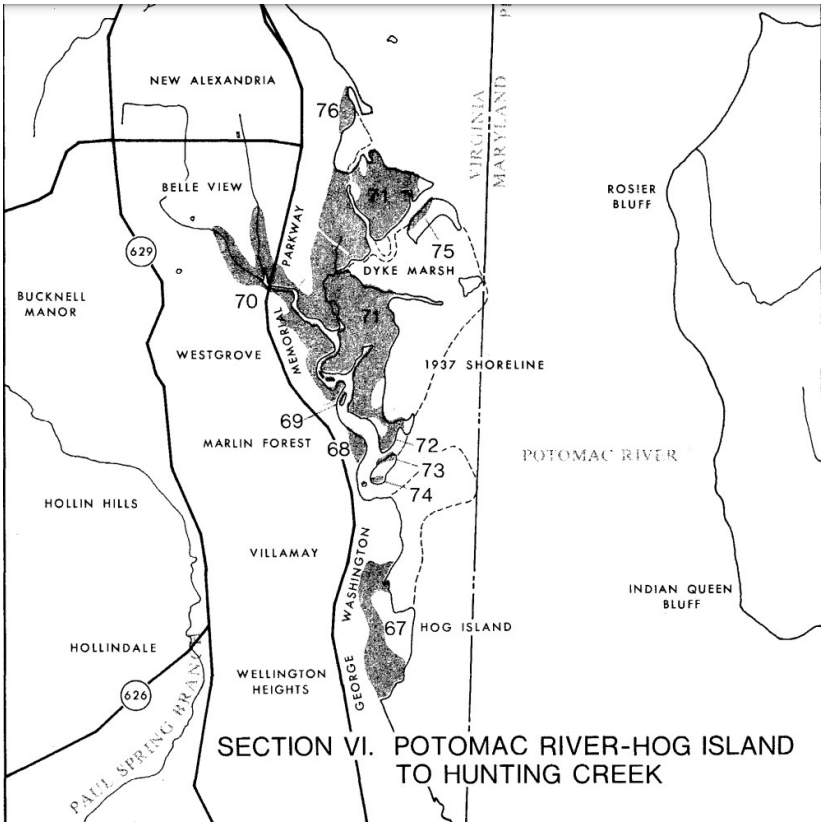

Figure 1. Historic Tidal Marsh Inventory for Dyke Marsh (1976) shows wetland loss compared to a 1937 shoreline.

A copy of the 1976 Fairfax County Tidal Marsh Inventory report is available online https://scholarworks.wm.edu/reports/670/.

Round 2: Keeping Up with Digital Technology

VIMS gradually transferred the contents of the original Tidal Marsh Inventory from paper maps to digital formats in the 1980s and 1990s. This process usually happened with each locality's shoreline inventory update that included the location of all tidal marshes. The availability of inexpensive Global Positioning Systems (GPS), aerial images and emerging Geographic Information System (GIS) mapping technology helped quicken the pace for finishing each locality's inventory. The ability to compare aerial images from different time periods also improved.

Then VIMS completed another Tidal Marsh Inventory for all Virginia coastal localities from 2010-2019. The second TMI for Dyke Marsh was completed in 2012. Most of the tidal marsh was still dominated by cattails. Over 25 percent of the marsh was not accessible by small boat, so the dominant plant communities could not be determined. Some of the adjacent tidal forests remained, appearing as unmapped areas with trees surrounded by tidal marsh.

Results from the 2012 TMI are made available to the public through interactive online map viewers, such as the Virginia Coastal Viewer (Figure 2, next page). The juxtaposition of this large wetland complex with the surrounding human landscape is made apparent from this perspective. Each mapped wetland area has unique information associated with it, such as the size, date surveyed and dominant plant community where known.

Round 3: Eyes in the Sky and on the Ground

There is a high level of scientific interest and growing concern about accelerating sea level rise and the effects on tidal marshes. Tidal freshwater habitats are considered to be particularly vulnerable (Mitchell et al 2020). Without a more frequent tidal marsh inventory process, the pace of expected changes cannot be matched with accurate monitoring efforts.

To help address the need for ongoing monitoring, VIMS is now preparing another Shoreline and Tidal Marsh Inventory over the next three years. Fairfax County is one of the selected localities. The updated inventory is scheduled to be

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completed in 2026. All previously coded marsh polygons with "undetermined" plant communities will be targeted to identify what plants are there. Marsh migration corridors will be mapped to help identify existing upland areas and wetland forests that are expected to become tidal marshes due to elevation and sea-level rise.

Once again, recent advances in mapping technology will improve the inventory process and results. The 2023-2026 Tidal Marsh Inventory includes multispectral satellite imagery and artificial intelligence (AI) deep learning for more efficient marsh identification. Satellite sensors have proven to be useful for monitoring wetlands. Many studies have validated the approaches being used for this inventory. VIMS will also use unmanned aerial vehicles or drones to confirm that the satellite information is valid.

Tidal marshes are not the only target of the next inventory. Other shoreline features of interest include bank height, wave energy exposure, docks and boat ramps. Erosion control structures will also be identified, including bulkheads, revetments and a growing number of living shorelines. VIMS will also capture wetland restoration and stabilization projects like the one at Dyke Marsh in the next mapping effort.

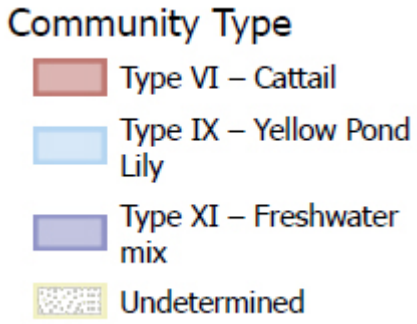
VIMS is also developing a community science web application so that local observers can report conditions for any tidal shoreline or marsh. This will help correct remote sensing errors and validate satellite data to maintain a shoreline inventory more accurately and efficiently in Virginia. Dyke Marsh visitors will be able to help identify plant communities that were previously undetermined using this new tool.

Figure 2. Results from the 2012 TMI are accessible with interactive map viewers that display tidal marsh areas with descriptions behind them. https://cmap22.vims.edu/VACoastalResourcesTool/?page=CoastalViewerPage

The VIMS Tidal Marsh Inventory that began more than 50 years ago continues to evolve to strategically support adaptive management of valuable wetland systems like Dyke Marsh into the future. From hand-drawn, paper maps and static reports in 1976, to online interactive maps in 2012, and now to satellite imagery, AI deep learning and community science, the process continues to evolve and improve.

The need to update information about all tidal marshes is urgent to help prepare for inevitable and possibly rapid changes to shoreline and tidal marsh conditions. At Dyke Marsh, the tidal wetlands are being closely watched at different levels -- in the sky by satellites passing overhead, by observers on the ground and a mid-level landscape perspective provided by the VIMS Tidal Marsh Inventory.

You can learn more about the shoreline and tidal marsh inventory process with these related VIMS articles (see next page).



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Decades in the making, online maps offer unique tools for citizens, coastal managers. D. Malmquist 2019. https://www.vims.edu/newsandevents/topstories/2019/ccrmp.php

Over a Half Century of Connecting Science and Management for Virginia's Tidal Wetlands at the Virginia Institute of Marine Science. 2023 https://doi.org/10.25773/zmt2-ax54

Additional funding to support the Virginia Shoreline and Tidal Marsh Inventory is provided by the National Oceanic and Atmospheric Administration (NOAA) and the Virginia Coastal Zone Management Program.

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major attempt by England to usurp American liberty. Often thought of as a war that happened on and near the waters of Lake Ontario, Lake Champlain, the Northwest and the Southeast, it also came upon our shores along the Potomac River.

On August 15, 1814, a combined military force, British Naval forces led by Rear Admiral Sir George Cockburn and a fleet commanded by Vice Admiral Sir Alexander Cochrane joined thousands of troops under the command of General Robert Ross in the Chesapeake Bay. The flotilla sailed up the Patuxent River, landing General Ross at Benedict, Maryland, with 5,000 men to march 30 miles to Bladensburg and on to set fire to the city of Washington, D.C.

Meanwhile, another flotilla, under the command of Captain James Gordon, sailed up the Potomac River in a diversionary tactic with seven vessels consisting of two frigates, Seahorse and Euryalus; bomb vessels, Devastation, Aetna and Meteor; and the rocket ship, Erebus. It is essential to note that the three bomb vessels and the rocket ship were part of the 25-hour bombardment of Fort McHenry in Baltimore a month later. The rockets and bombs from these very ships became immortalized in our national anthem to represent American resolve in the face of the British assault on America.

Gordon's flotilla sailed up the Potomac with the intent of arriving to meet General Ross's forces for their assault on Washington, D.C., but their ships ran into frequent difficulties traversing the shallow water of the Potomac River and persistently ran aground. Along the way, they encountered Fort Warburton, later renamed Fort Washington, under the command of Captain Samuel Dyson on the Maryland side of the river just three and half miles downriver from Belle Haven, Virginia. Euryalus bombarded the fort for two hours. Dyson had orders to destroy and abandon the fort only if attacked by land. However, even without an imminent or realized invasion, Captain Dyson chose to destroy the fort and abandon the site altogether. By destroying the fort,

Charles, William, Artist. Johnny Bull and the Alexandrians / William Charles, Ssc. United States Alexandria Virginia, 1814. Philada.: Pubd, and sold wholesale by William Charles. Photograph. https://www.loc.gov/item/2002708985/.

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Dyson left the city practically defenseless against bombardment by the British Royal Navy.

Gordon's flotilla arrived below Alexandria on August 27, 1814, and anchored just two miles south, near where the Belle Haven Marina is today. The frigate, Seahorse, advanced further upriver, placing the city of Alexandria within range of its guns. The following day, the flotilla prepared to fire on the city. However, a Committee of Vigilance formed by Alexandria Mayor Charles Simms rowed out to meet Captain Gordon under a flag of truce and petitioned him not to destroy the town. After an intense negotiation, Captain Gordon agreed not to destroy the town if they would consent to the looting and pillaging of the town of its goods as spoils of war.

The town leaders gave in to the Brits' demands and surrendered 16,000 barrels of flour, 1,000 hogsheads of tobacco, 150 bales of cotton and $5,000 worth of wine. In three days, the British flotilla loaded 21 ships seized from the Alexandrians and laden with goods taken from the town. Those stores that could not be carried away were torched. By September 1, 1814, all British ships joined the rest of the fleet for their journey down the Potomac. American Commodore John Rodgers, Captain David Porter and Oliver Perry pursued and attacked the British at River Farm (near Fort Hunt) to Belvoir Neck south of Mount Vernon and White House Landing (near present day Fort Belvoir). Unfortunately, the American Navy was unable to stop Captain Gordon's flotilla from leaving with Alexandria's goods.

By September 13, 1814, the British fleet was at the mouth of the Patuxent River and preparing to attack and lay waste to Baltimore just as they had to Washington, D.C., the month before.

What a sight it must have been for the local residents to see the British naval flags flying high atop the masts of ships just off Dyke Marsh and the smoke rising from the burning of Alexandria.

Bibliography: Pratt, Sherman W., "Northern Virginia in the War of 1812." Arlington Historical Magazine, October 2002.

Larry Cartwright, Dedicated for 30 Years

Larry's poster can be viewed in larger format online in an article in the center column of the FODM home page at https://www.fodm.org.

Larry Cartwright prepared a poster covering volunteers' 30 years of observations of breeding bird activity in the Dyke Marsh Wildlife Preserve and presented it on April 4 at the National Park Service's Spotlight on National Park Resources in the National Capital Region. It's titled "Trends among Migrant Birds in the Dyke Marsh Breeding Bird Survey in a Thirty-Year Period (1993-2023)." Thank you, Larry, NPS's Mireya Stirzaker and other NPS staff for this opportunity to recognize our volunteers' good work and the challenges that birds face.

Title: Trends Among Migrant Birds in the Dyke Marsh Breeding Bird Survey in a Thirty-Year Period (1993-2023)

PRESENTER:
Larry Cartwright

BACKGROUND: Mr. Cartwright has participated in the Dyke Marsh Breeding Bird Survey as both an observer and a PI for 30 years. This survey records the avian species nesting at Dyke Marsh, with extra effort made to assess the population and nest density of neotropical migrants and other high visibility species.

METHODS

1. Count every bird in the survey area.
2. Apply behavioral criteria to determine breeding status.

RESULTS

- Both land and marsh birds are in decline or have disappeared while others are changing their breeding habits, and some may be adapting to changes in habitat.
- This situation may be specific to Dyke Marsh or part of a regional change in conditions.

CAUSES FOR MIGRANT DECLINE AND HABITAT CHANGES

- Death of Pumpkin Ash trees due to Emerald Ash Borer, promoting nest exposure and increased predation, primarily by Fish Crows
- Changes or decline in prey base
- Marsh erosion
- Tidal channels widening in response to rising water levels in Potomac River

Dyke Marsh is one of the largest remaining freshwater tidal wetlands in the Washington metropolitan area. How are its breeding birds doing?

Photo by: Jane Gamble
18 May 2021

ORCHARD ORIOLE
Icterus spurius
Successfully breeding, however, many males are first year breeders, which may indicate that habitat has become suboptimal.

Photo by: Cornell Laboratory of Ornithology

BALTIMORE ORIOLE
Icterus galbula
In contrast to the Orchard oriole, this species has experienced a decline over the past 5 years. Recent breeding seasons have seen few or no birds building nests.

Photo by: Cornell Laboratory of Ornithology

WARBLING VIREO
Vireo gilvus
Once easy to locate at Dyke Marsh, these birds have virtually disappeared from the southern portion of the marsh. Steady populations in the north have fewer nests and fledged no young in 2022.

Photo by: Ed Eder
14 July 2022

EASTERN KINGBIRD
Tyrannus tyrannus
Appears to be modifying their strategy, likely in response to decline in the populations of odonates, their prey base. All young appear to have fledged in 2022 and 2023.

Photo by: Ed Eder
24 May 2014

YELLOW WARBLER
Setophaga petechia
Until recently, a dependable breeder whose decline parallels that of the Baltimore oriole. In 2022 one nest and a single fledgling were recorded. No evidence of attempted breeding was found in 2023.

Photo by: Cornell Laboratory of Ornithology

NORTHERN PARULA
Setophaga americana
A confirmed breeder in the past, presence of this species has not been detected since 2019. The Acadian flycatcher seems to be following the same fate.

Photo by: Ed Eder
8 July 2017

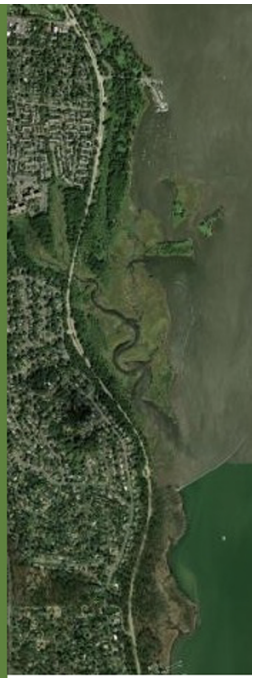
MARSH WREN
Cistothorus palustris
Studies in the 1950s recorded 87 singing males but by 1999, a graduate study tallied only 34 territorial males and 14 breeding females producing 11 fledged young showing evidence of serious decline. Last confirmed as breeders in 2017.

Photo by: Ed Eder
16 June 2017

LEAST BITTERN
Ixobrychus exilis
Preferring narrow channels in dense cattail habitat, these birds ceased breeding activity in the south marsh as water levels rose and channels widened. Population appears steady with the same number of birds occupying a smaller area.

Photo by: Ed Eder
19 June 2022

PROTHONOTARY WARBLER
Protonotaria citrea
Nesting well at Dyke Marsh, perhaps benefitting from the creation of additional cavities in dead ash trees. 10 territorial males recorded in 2022. At least two breeding pairs produced fledged young the past 2 years.



Take a picture to **download** the **full slideshow**

2024 SPOTLIGHT ON NATIONAL PARK RESOURCES IN THE NATIONAL CAPITAL REGION

National Park Service
U.S. Department of the Interior
Urban Ecology Research Learning Alliance

FODM's March 3 Election Results

At the March 3 annual meeting, the Friends of Dyke Marsh elected new officers and members of the Board of Directors. See page 2. Our two new Board members are Katya Wanzer and Stacy Langsdale.

Katya has extensive experience in public health and is the operations manager for the Health, Medicine and Society Program at the Aspen Institute in Washington, D.C. An Alexandria resident, she is on Porto Vecchio's Waterfront Committee and has participated in many Potomac River shoreline cleanups.

Born and raised in New Mexico, Katya earned a Bachelor of Arts degree in humanities from San Francisco State University, a Master of Public Health degree from Hunter College in New York City and a health information technology career certificate from Northern Virginia Community College. Katya is our new secretary.

Stacy works in the Collaboration and Public Participation Center of Expertise at the U.S. Army Corps of Engineers. Her career has focused on bridging the gap between technical experts and people needing to understand and use technical information.

An Alexandria resident, she has a Bachelor of Science degree in civil engineering from the University of Maryland, a Master of Science degree in hydrology from the University of Nevada, Reno, and a Ph.D. in resource management and environmental studies from the University of British Columbia.

Welcome New FODM Members

FODM welcomes our **new members**: Linda Bock, Sybille Braum, Elizabeth Cohan, Kelly Geer, David Joy, William Klein, Kamil Kruczek, Vanessa Molineaux, Kathleen Russell and Julia Tanner. We welcome our **new life member** Michael Hamill.

Sunday Morning Bird Walks

FODM holds bird walks on 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.

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 newsletter, The Marsh Wren; membership meetings with knowledgeable speakers; bird and nature 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, its protection and full restoration. Just click on the "Join" or "Donate" button on our membership page at www.fodm.org/membership.html to make your tax-deductible contribution by credit card or from your bank account securely through PayPal. For help, email 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 (starting July 1, $20.00), $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 supporting FODM.

✂

DUES AMOUNT..…..… $ _____
ADDITIONAL CONTRIBUTION..…….. $ _____

NAME _____
ADDRESS _____
CITY_____ STATE ____ ZIP_____
TELEPHONE NUMBER _____
EMAIL ADDRESS _____

Please address any questions or comments about *The Marsh Wren* to Glenda Booth 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).

The Marsh Wren

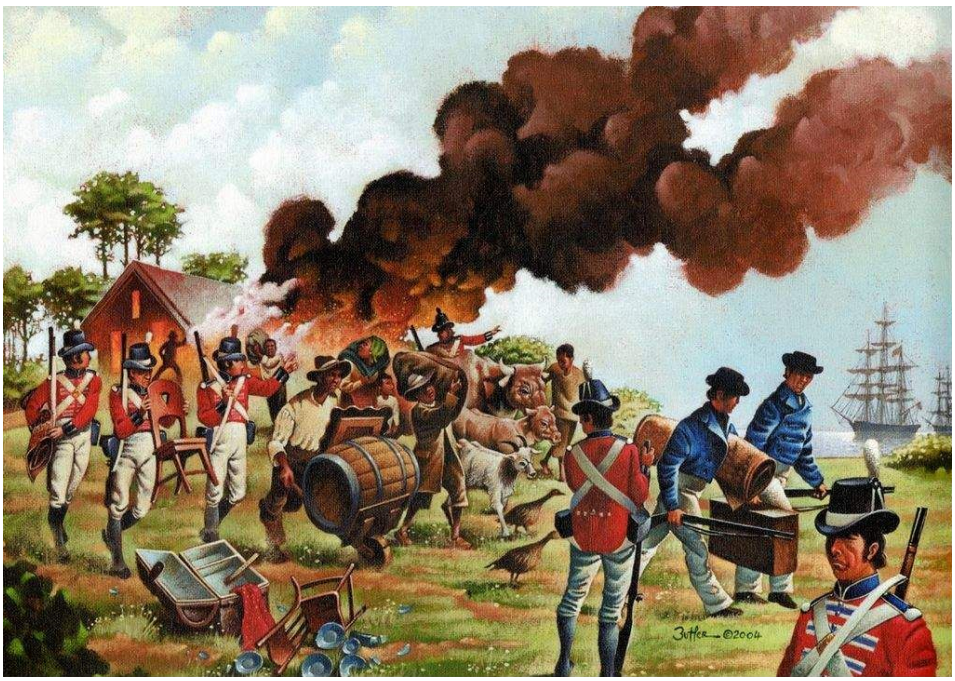
The Friends of Dyke Marsh
P.O. Box 7183
Alexandria, VA 22307-7183

The Dyke Marsh Area: Eyewitness to the British Navy's Occupation of Alexandria in 1814

BY ELIAS N. "SONNY" LORANZO JR.
Historian, George Washington Memorial Parkway

The Alexandria-eastern Fairfax area is rich in history. Fairfax County, the Belle Haven area and Dyke Marsh played a part in the history that permeates the area and played a vital role in building a nation. However, the area's history is not without challenges or infringement of individual liberties by the British.

When most Americans think of British invasions, we think of when the Beatles arrived on our shores in 1964, bringing a new sound to rock-and-roll music. Others may think about the War for American Independence. Between the two, the War of 1812 stands as a second



British raid on Chesapeake Bay War of 1812 Naval Air Station Patuxent River, Public Domain

SEE **DYKE MARSH EYEWITNESS** ON PAGE **9**