The Marsh Wren

SINCE 1976 | THE FRIENDS OF DYKE MARSH | FALL 2024

FODM 2024 Member Meetings

October 23, Captivating Caterpillars, Zoom (p. 1)

Calendar of Events

October 21, Fall Colors Walk

Every Sunday, except for December 14 to January 5, 8 a.m., Bird Walk

Twice a month, Invasive Plant Control

Check www.fodm.org for details.

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Captivating Caterpillars

October 23, 7 p.m.
FODM Zoom Program

Caterpillars are often hard for people to see, but these Lepidopteran larvae are diverse, often colorful and important to our ecology. Please join our Zoom program on October 23, 7 p.m., and learn all about caterpillars from Dr. Rebecca Forkner, Associate Professor, George Mason University.

Caterpillars are –

- often colorful and excellent camouflagers;
- the larvae of moths and butterflies, the second stage of four in the insect's life-cycle; and
- nutritious food for birds, ants, spiders, wasps, toads and other wildlife. Chickadees feed their young from 390 to 570 caterpillars a day.

Tiger swallowtail caterpillar (*Papilio glaucus*)
Photo by Glenda Booth

Dr. Forkner is an entomologist, community ecologist and plant biochemist. She researches the ecological and evolutionary factors responsible for the colors we observe in plants and in insects and plant-insect interactions. Click here or visit the left side of our home page at www.fodm.org to register.

The program's cosponsors are the Friends of Mason Neck State Park; Friends of Accotink Creek; Virginia Native Plant Society, Potowmack Chapter; and Plant NoVa Natives.

A New National Park

The National Park system grew to 431 parks with the designation of the Springfield 1908 Race Riot National Monument by President Joe Biden. The new national monument will preserve historic objects associated with a violent, racially-motivated riot in President Abraham Lincoln's hometown of Springfield, Illinois, that ultimately catalyzed the civil rights movement and led to the formation of the National Association for the Advancement of Colored People (NAACP).

"The caterpillar does all the work, but the butterfly gets all the publicity." -- George Carlin, Comedian

George Washington Memorial Parkway Superintendent's Message

BY CHARLES CUVELIER

On behalf of the George Washington Memorial Parkway, I'm sharing a few updates. We have not been successful this year awarding a contract for removing the abandoned dry land and sunken vessels in Dyke Marsh. Our staff located vendors and put together a contracting package; however, we encountered problems that prevented awarding the contract. Any vendor needs to be registered in Sam.gov to receive a government contract. Of the vendors available, none of them took the necessary steps to register in that system. With the end of the current fiscal year upon us, we will initiate this effort again in the fall/winter.

A big thanks to you for generating community support for our grant application for drinking water fountain replacements. We applied for a grant from the National Park Foundation and their program to reduce single use plastics by installing refillable water bottle stations. We received $475,588 which will replace multiple fountains along the Mount Vernon Trail in the next year. This year, we replaced two fountains, one at Theodore Roosevelt Island and another at the Peter Webster Memorial near the Alexandria Avenue bridge.

Park staff, along with support from the Army Corps of Engineers, got approval of a permit from the Virginia Marine Resources Commission at their August meeting to conduct additional work on the six sills constructed to stabilize Dyke Marsh. The contract, to be administered by the Corps, will place additional stone material on top of the existing sills to mitigate the effects of settling and return the sills to their original height.

Maddie Fleenor stops for a refreshing drink after a long run. She greatly appreciates the new installation along the Mt. Vernon Trail at the Peter Webster Memorial. Photo by Robert Veltkamp

I have moved on to now serve as the Associate Director for Visitor and Resource Protection within the National Park Service. As this is my last article for your newsletter, I want to share with you my sincere appreciation and gratitude for our partnership. The FODM Board represents your concerns well and our partnership has strengthened as a result. All the best.

Christine Smith, who has served as Deputy Superintendent of the George Washington Memorial Parkway for the past four years, is currently serving as Acting Superintendent. Plans are underway to hire a new superintendent, but an estimated timeline for this process is not yet available.

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or our **Facebook** page.

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 fall migration miracle is well underway. Check out https://birdcast.info/ and learn how many birds passed through our area each night. Monarch butterflies east of the Rocky Mountains migrate to Mexico between September and November and we've seen a few. Learn more at https://www.monarchwatch.org/migration/.

Some sharp birders have seen shorebirds, likely migrating, on the marsh's sills and breakwater. David Ledwith commented that they "hang out on the sills at high tide when the mudflats at Hunting Creek are not exposed." Examples: American avocet (*Recurvirostra americana*), semi-palmated plover (*Charadrius semipalmatus)*, willet (*Tringa semipalmata*), ruddy turnstone (*Arenaria interpres)*, sanderling (*Calidris alba*), dunlin (*Calidris alpina)*, spotted sandpiper (*Actitis macularius*), solitary sandpiper (*Tringa solitaria*), least sandpiper (*Calidris minutilla)* and western sandpiper (*Calidris mauri*).

Stabilizing the Marsh

Thanks to a grant from Wetlands Watch and the Virginia Outdoors Foundation, on April 22, 2024, ten volunteers and two National Park Service (NPS) staffers planted 150 black willow tree (Sali nigra) stakes in the hydric soils of Dyke Marsh. We hope they will develop root systems, help hold the soil in place and encourage soil accretion.

No Jet Skis in Dyke Marsh

After receiving reports of jet skis operating in Dyke Marsh, on November 23, 2023, FODM asked then-Parkway Superintendent Charles Cuvelier to take steps to make the public and the Belle Haven Marina managers aware of the NPS regulations that prohibit jet skis.

In his April 22, 2024, response, he wrote that he notified the Belle Haven Marina concessioner that NPS regulations (36 CFR 3.9) prohibit jet skis and other personal watercraft in the preserve. Marina managers posted a sign on the office building there.

We believe that these watercraft can negatively impact wildlife and likely disturbed ospreys that nested near the boat ramp in 2023. Jet skis also impair vegetation and other natural resources and disturb park visitors.

While we expect that the marina manager will not allow jet skis to be launched at the boat ramp, neither the concessioner nor FODM enforces NPS regulations. The U.S. Park Police have that authority.

If you observe jet skis being launched or operating in Dyke Marsh, please take a photograph and immediately contact the U.S. Park Police at 703-285-1000 and send your photo at that time to Lt. Timothy Wallace (timothy_wallace@nps.gov). Please let FODM know too at info@fodm.org.

Monarch butterfly
Photo by Glenda Booth

The Parkway's Biodiversity

Here's an update on the rich biodiversity of the George Washington Memorial Parkway as of September 5: 294 species of birds, 35 mammals, 25 reptiles, 22 amphibians, 81 butterflies, 785 moths, 207 arachnids, 172 bees, 73 dragonflies and damselflies, 111 caddisflies, 1,487 beetles, 62 fish, 84 mollusks, and 48 crustaceans, 59 ants, 323 flies, 180 sawflies and 50 crickets, grasshoppers and katydids.

EPA Head, on His Goals

On April 5, I had the privilege of hearing Michael Regan, Administrator of the U.S. Environmental Protection Agency, speak. Among others, he cited as priorities, environmental justice, stronger limits on chemical plants' emissions, curbing plastic waste pollution and reducing greenhouse gases. He stressed that EPA uses a science based, decision-making process. Here are a few of his comments that stood out:

- "Disinformation is so prevalent. It's a threat to democracy."
- "We must have a sense of urgency about climate change."
- "In the transition to a 21st century economy, we do not want to leave anyone behind."
- "I do this because I'm a father."

Share Your Talents

Studies show that volunteering is good for our mental and physical health. Here are some ways you can help:

- Serve on the Board of Directors.
- Hand out materials at events.
- Lead children's programs.
- Write articles and take photographs.
- Survey birds, butterflies, dragonflies and plants.

Email us at info@fodm.org. We hope to hear from you soon.

Given rising costs and several new projects, the Board of Directors voted to increase members' annual dues from $15 to $20, effective when your membership expires.

The 2023 Dyke Marsh Wildlife Preserve Breeding Bird Survey Results

BY LARRY CARTWRIGHT, COMPILER, Dyke Marsh Breeding Bird Survey

Friends of Dyke Marsh volunteers conducted the 2023 Breeding Bird Survey between May 27 and July 9, but any data collected outside of this period that confirmed breeding activity was entered into the database. This permits us to filter out most migrants that do not breed here. I also added information provided from reliable outside sources to supplement data reported by the survey teams.

The survey tract encompassed the Belle Haven Park picnic area, the Belle Haven Marina, the open marsh, including what we call the "Little and Big Guts," the Virginia shoreline to the channel of the Potomac River and the surrounding area from the stone bridge at the mouth of Hunting Creek near Porto Vecchio to south of Morningside Lane.

The survey methodology uses behavioral criteria to determine the breeding status of all species found in the survey tract. Species are placed into one of four categories: confirmed breeder, probable breeder, possible breeder and present. Our teams reported 78 species in the survey tract at Dyke Marsh during 2023. There were 47 species confirmed as breeders, eight as probable breeders and another eight as possible breeders. Additionally, we listed 15 species as present, but they were a combination of colonial breeding waterbird species not using a rookery inside the survey tract, species in unsuitable breeding habitat and migrants still heading north.

Kayak surveyors confirmed that least bitterns (*Botarus exilis*) are occupying only the northern half of the Big Gut and the marsh vegetation around the Haul Road Trail. It appears that a combination of erosion and water level rise have widened the tributaries in the southern portion of the Big Gut, rendering them unsuitable for breeding. Least bitterns prefer to build nests in the narrower tributaries where the nests may be easier to conceal and where the adults can stay hidden while foraging.

Despite the concentration in a smaller area, least bitterns successfully bred in the upper portion of the Big Gut in 2023. On July 15, a kayak surveyor reported a total of four fledged young perhaps representing at least two family groups. The surveyor noted that some of the youngsters were found in the "Northeast Passage," a narrow tributary of the Big Gut that over the years has seemed to be a favorite nesting location for least bitterns. The remaining young were at a location we call "Heron Hook," the farthest south least bitterns are now being reported and about halfway up the Big Gut.

A recently fledged green heron with parent (not in photo) near the Haul Road Trail footbridge. Photo by Ed Eder

A highlight of the survey was the first confirmation of a breeding green heron (*Butorides virescens*) at Dyke Marsh. Volunteers have witnessed fledged young with tufts of juvenile plumage protruding from the crown and neck in the marsh in previous years, but these birds were always alone and I assumed they must be birds dispersing from other breeding locations. In 2023, however, we found a recently fledged youngster with a parent, sealing the confirmation.

The breeding success of our normally common migrant songbirds in 2023 was noticeably mixed, the possible beginning of a trend that I noted last year. Orchard oriole (*Icterus spurius*) and great crested flycatcher numbers (*Myiarchus crinitus*) remain close to historic levels and fledged young of both species were reported at multiple locations along the Haul Road Trail from what we call "Dead Beaver Beach" to the Haul Road boardwalk. Surveyors heard the "weep"

A least bittern stalks the upper Big Gut. Photo by John Cushing

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vocalization of great crested flycatchers throughout the Belle Haven Park picnic area as well.

Prothonotary warblers (*Protonoaria citrea*) were present throughout the marsh and in recent years have occupied wet areas along the Haul Road Trail. It was along the southern stretch of the trail north of the dogleg turn that a witness reported and photographed a prothonotary warbler feeding an offspring in mid-July. Indigo buntings (*Passerina cyanea*) seem to be increasing in numbers as well as successfully raising young. From a total of three or four territorial males along the Haul Road Trail just a few years ago, I estimate a total of six or seven in 2023, plus another territorial male in the wooded area bordering the southern portion of the Belle Haven Park picnic area. At least three more males held territory in the southern portion of the survey tract.

Although present in smaller numbers than the birds mentioned above, eastern wood-pewees (*Contopus virens*), red-eyed vireos (*Vireo olivaceus*) and common yellowthroats (*Geothlypis trichas*) remain documented summer occupants of the marsh and are often recorded as breeders, even if not every year.

Many breeding birds historically confirmed in Dyke Marsh are not faring so well. Baltimore orioles (*Icterus galuba*), warbling vireos (*Vireo gilvus*), eastern kingbirds (*Tyrannus tyrannus*) and yellow warblers (*Setophaga petecha*) are a few of the migrant songbirds that have been in noticeable decline in Dyke Marsh. Baltimore orioles presented a hopeful sign during migration, with one observer finding three potential breeding pairs on May 14. However, by early June, numbers dipped to below normal with volunteers reporting several single males and only one or two pairs for the rest of the survey.

Warbling vireos showed significantly reduced numbers. They were absent from the Belle Haven Park picnic area, a location where they were easily found a few years ago, as well as missing from the wooded area south of the Big Gut bridge (bridge 23). Volunteers did locate about a half dozen singing males along the Haul Road Trail and an additional persistent male that sang at the marina all summer. Try as hard as we might, we could not confirm either Baltimore orioles or warbling vireos as breeders.

Yellow warblers, formerly reliable breeders near the Haul Road Trail boardwalk, were totally missing during the 2023 breeding season. A volunteer did report one bird in mid-July, but it was likely dispersing from another breeding location. We also were unable to find Acadian flycatchers (*Empidonax virescens*) in 2023 and northern parulas (*Setophaga americana*) have been unrecorded for well over five years.

Although volunteers found only four active eastern kingbird nests, fewer than normal when compared over the last five years, at least one breeding pair showed some adaptability in its breeding strategy. This pair bred in a sycamore tree beside the Haul Road Trail boardwalk and successfully raised two successive broods (double-clutched). They apparently used a combination of reduced brood size and an alternate prey base. Eastern kingbirds have a maximum clutch size of five eggs and generally feed older nestlings and fledglings odonates (dragonflies and damselflies).

Two eastern kingbird nestlings occupy a nest along boardwalk at the end of the Haul Road Trail. Photo by Katherine Wychulis

A parallel FODM survey conducted for butterflies and odonates noted a reduced presence of dragonflies and damselflies during the summer of 2023. A breeding bird survey participant reported an eastern kingbird nest near the boardwalk by late May. Within a few weeks we saw the nestlings, but instead of the expected four or five young, we found only two. During the latter stages of nestling development and fledging during the last days of June, we discovered that the parents were not carrying primarily odonates to the young, but prey like carpenter bees.

Although many authorities say that double-clutching is not normal with this species, kingbirds were building a new nest by mid-July quite close to the original nest. The second breeding attempt yielded identical results. Two young fledged by August 20 and their primary diet consisted of bees and other flying insects, but few odonates.

I cannot say with certainty that there is any correlation between small broods and a change of prey base among eastern kingbirds. It does, however, suggest an ability for some kingbirds to adapt to a changing environment. Nor can I explain why some migrant songbirds appear to be doing well as breeders at Dyke Marsh while others are not. The situation is complex and warrants more investigation.

I can conclude on an upbeat topic for the 2023 survey, especially for birds of prey fans. For the first time since I became compiler three decades ago, five species of raptors bred successfully at Dyke Marsh. A barred owl (*Strix varia*) pair using a cavity along the marina road, a great

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horned owl (*Bubo virginianus*) pair using a hollow depression in a tree near Dead Beaver Beach and a red-shouldered hawk (*Buteo lineatus*) pair that placed its large stick nest in plain sight near the entrance to Belle Haven Park, all fledged one youngster. The red-shouldered hawk nestling had one sibling that died soon after hatching. I watched the surviving bird fledge by stepping off the rim of the nest and flapping awkwardly to a lower branch. That was a thrill.

Although the Belle Haven Marina osprey (*Pandion haliaetus*) nest failed in 2023, five additional nests produced young, consisting of two platform nests at Porto Vecchio Condominiums and three nests in the southern portion of Dyke Marsh. The Haul Road Trail bald eagle (*Haliaeetus leucocephalus*) pair fledged three young and the Tulane Drive pair fledged two offspring just a week before the nest collapsed as the surrounding branches likely became too weak to support the structure. Now those young eagles were just plain lucky!

The Breeding Bird Survey could not be conducted without volunteers who collect the data. Thanks to all those who participated in 2023. In alphabetical order, they are Eldon Boes, Glenda Booth, Julie Cooper, John Cushing, Ed Eder, Carolyn Gamble, Joel Goldman, Bill Hoover, Todd Kiraly, David (Nick) Nichols, Roger Miller, Dixie Sommers, Alisa Wong and Katherine Wychulis.

Barred owl brings prey items to nest cavity along the marina road. Photo by Ed Eder

A single barred owl youngster emerges from nest cavity. Photo by Ed Eder

Definition of Categories:

Confirmed Breeder: Any species for which there is a minimum evidence of a nest. A species need not successfully fledge young to be placed in the confirmed category.
Probable Breeder: Any species engaged in pre-nesting activity, such as a male on territory, courtship behavior or even the presence of a pair, but for which there is no evidence of a nest. Since birds can and do sing and display to females during migration, this category cannot be used until the safe dates are reached.
Possible Breeder: Any species, male or female, observed in suitable habitat, but giving no hard evidence of breeding. Unless actively breeding, all birds in suitable habitat before the start of the safe date are placed in this category.
Present: Any species observed that is not in suitable habitat or out of its breeding range. It also applies to colonial water birds in the survey tract not associated with a rookery.

Definition of Safe Dates

We use safe dates as a means of deciding if a bird can be considered a breeder or a migrant. Safe dates are simply defined as a period beginning when all members of a given species have ceased to migrate in the spring and ending when they begin to migrate in the fall. Unless a bird is engaged in behavior that confirms breeding, it will be placed no higher than in the possible breeder category if it is observed outside the safe dates assigned to that species.

Red-shouldered hawk nest construction near the south parking lot at Belle Haven Park picnic area. Photo by Ed Eder

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The 2023 Breeding Bird Survey Results

Confirmed - 47 species: Canada goose, wood duck, mallard, mourning dove, least bittern, green heron, osprey, bald eagle, red-shouldered hawk, great horned owl, barred owl, red-bellied woodpecker, downy woodpecker, hairy woodpecker, northern flicker, pileated woodpecker, great crested flycatcher, eastern kingbird, eastern wood-pewee, eastern phoebe, red-eyed vireo, blue jay, fish crow, tree swallow, northern rough-winged swallow, barn swallow, Carolina chickadee, tufted titmouse, Carolina wren, white-breasted nuthatch, blue-gray gnatcatcher, gray catbird, brown thrasher, northern mockingbird, European starling, eastern bluebird, American robin, house sparrow, house finch, orchard oriole, red-winged blackbird, brown-headed cowbird, common grackle, black-and-white warbler, prothonotary warbler, northern cardinal, indigo bunting

Probable – 8 species: chimney swift, willow flycatcher, warbling vireo, purple martin, American goldfinch, song sparrow, Baltimore oriole, common yellowthroat

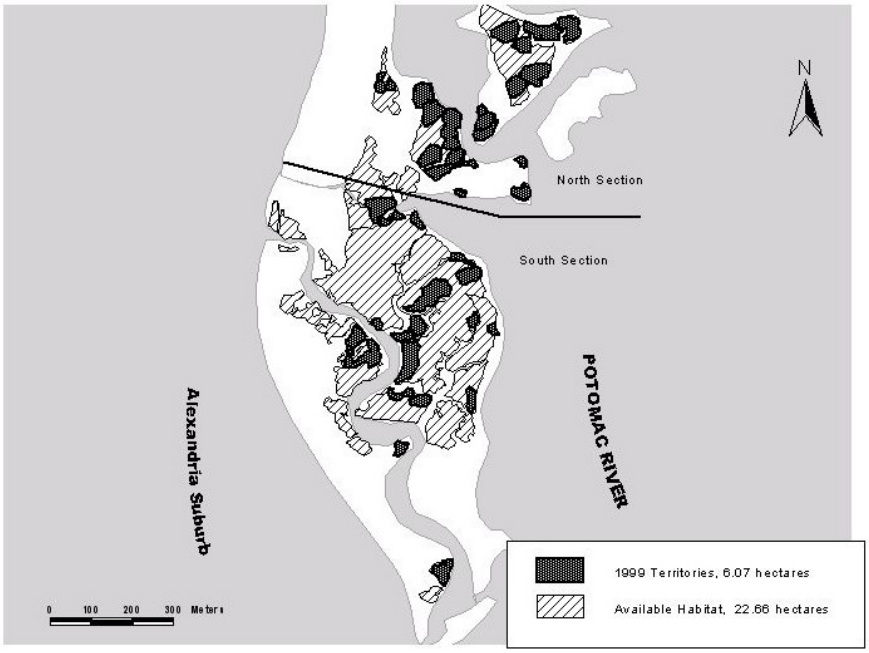
Possible – 8 species: ruby-throated hummingbird, spotted sandpiper, belted kingfisher, American crow, cedar waxwing, wood thrush, American redstart, yellow warbler

Present – 15 species: rock pigeon, semipalmated plover, least sandpiper, semipalmated sandpiper, willet, ring-billed gull, caspian tern, double-crested cormorant, great blue heron, great egret, black vulture, turkey vulture, gray-cheeked thrush, magnolia warbler, blackpoll warbler

Marsh Wren Research Materials Now in the Smithsonian

BY SANDY SPENCER
Retired Biologist

Dyke Marsh and the surrounding emergent marshlands of the upper tidal Potomac River in the Washington, D.C., environs were once a stronghold for breeding marsh wrens (*Cistothorus palustris)*. In the 1940s, observers reported hundreds of singing marsh wrens. By the mid-20th century, dredging, erosion and development greatly reduced suitable habitat for the species (See www.fodm.org/restoration/restoring-the-marsh.html and www.fodm.org/images/Restore.pdf). By 1950, surveyors counted only 87 singing males in the marsh (Jackson M. Abbott, Smithsonian Institution Archives, Ascension No. 93-027, 92-117, and 97-030).



Map created by Sandy Spencer from 1994 Alexandria Quadrangle, ESRI, UTM NAD 83.

For my Master's in Biology research thesis at George Mason University, I conducted a follow-on study of breeding marsh wrens in 1998 and 1999 to estimate the population size, map boundaries of singing males' breeding territories, nest sites, used versus available habitat, reproductive success and nest fates, vegetation composition and density, shoreline characterization and other parameters of nest sites and proximity to competitors (especially red-winged black birds (*Agelaius phoeniceus*)).

The original field research materials for this work are now housed at the Smithsonian Institution. This includes all the field maps of territories and nest sites, nest data sheets, aerial photos, vegetation and shoreline data, reproductive success results and much more. The public can view these materials at the Smithsonian Institution Archives, Ascension No. 24-146, located at Capital Gallery, Suite 3000, 600 Maryland Avenue, S.W., P.O. Box 37012, MRC-507, Washington, D.C. 20013-7012, telephone number, 202-633-5925 or siarchives.si.edu. The link to the original study manuscript is at George Mason University's Mason Archival Repository Service (MARS), http://hdl.handle.net/1920/13639. I provided a hard copy to the National Park Service's George Washington Memorial Parkway headquarters office.

John Smith's Exploration of the Potomac

BY ELIAS N. LOZANO, JR., Historian, George Washington Memorial Parkway

For many Americans, the name Captain John Smith brings about recollections of his legendary and often misrepresented tale of Pocahontas, but few people connect him with Dyke Marsh and his 1608 exploration of the Potomac River.

Captain Smith's ship departed from the Jamestown settlement on June 2, 1608, with a crew of 14 men. They intended to explore the Potomac, Patapsco and the Rappahannock Rivers. A historical marker located on the George Washington Memorial Parkway at the footbridge crossing into Theodore Roosevelt Island recognizes the Indigenous villages identified by Captain Smith on that voyage. Among them was Assaomeck, a village on the south side of Hunting Creek.

Captain Smith's expedition was not without its challenges. His journey took him as far as Great Falls, where he was forced to turn back and return to Jamestown due to the rapids there. Just before leaving Jamestown, he was warned by Indigenous people friendly to the settlers that Powhatan, Chief of the Algonquian Federation, had ordered the Doeg to betray Smith. This warning sheds light on the complex political dynamics among the various tribes. Captain Smith received an unfriendly reception from some of the tribes along his route. When he encountered the Doeg Indians at Tauxenent on the Occoquan River, he had a more cordial reception. While the Doeg were part of the Algonquian Federation, they disliked Powhatan, hence, the welcomed reception that included a celebratory feast at the chief's dwelling.

Captain John Smith. SOURCE: "Captain John Smith." Engraving. ca.1616. National Park Service

The people that Captain Smith identified living in Assaomeck were Doegs. Algonquin speakers such as the Doeg populated the coastal region from today's Hampton Roads, Virginia, north to the Potomac River, which included the village of Assaomeck near present-day Dyke Marsh. The Doeg people, with their rich cultural heritage, were hunter-gatherers who sustained themselves by cultivating staple crops such as squash, maize and beans and foraging for nuts and berries. The men wore their hair short on one side for religious reasons and to facilitate the use of a bow, while the women bore symbolic tattoos. Woven mats or bark attached to pole frames formed their dwellings with a central opening to allow the smoke from cooking fires to escape through the ceiling.

While the Doegs eventually left by force or displacement by colonists from their lands, their memory lives on in some names that remain: Dogue Creek; Occoquan ("at the end of the water"); Marumsco ("at the island rock"); Quantico ("by the long stream"); and Potomac ("trader"). These names, which have endured through the centuries, serve as a powerful reminder of the enduring legacy of the Doeg people. They connect us to the past and the rich history of this region, reinforcing the historical significance of the Doeg people and their contributions to the region.

NOTE: It is important to note that the map is oriented in a unique way as when it was first printed in 1612. When John Smith created the map, he did not use the conventional method of orienting the geography. Rather than place north at the top of the map, Smith placed west at the top as if approaching the shore from the east. SOURCE: "Alexandria and John Smith's Map." Office of Historic Alexandria.

Zoomed in map of Alexandria derived from image shown in the previous map. SOURCE: "Alexandria and John Smith's Map." Office of Historic Alexandria.

The Parkway's Trees Are in Trouble

BY GLENDA BOOTH

National Park Service studies have concluded that many of the trees and forests of the NPS George Washington Memorial Parkway (GWMP) are under serious stress and at long-term risk. The Potomac Conservancy gave the river's shoreline forests a D+ grade in 2023 (https://potomacreportcard.org/). The Chesapeake Bay Foundation reported last year that tree cover has declined while impervious surfaces have increased in the watershed.

GWMP's trees and forests face multiple challenges:

Deer browse: Deer eat young saplings and other vegetation, which prevents natural tree regeneration. ". . . patterns of consistently insufficient regeneration or altered species composition call into question the long-term viability and resilience of forest ecosystems (Bradshaw & Waller, 2016; Russell et al., 2017). (https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2837)

Invasive plants: Around 29 percent of the parkway's plants are invasive, plants that can outcompete more valuable native plants.

Invasive insects: "Stressors include forest pests and pathogens that functionally eliminate individual species from the canopy, including emerald ash borer (Agrilus planipennis), hemlock woolly adelgid (Adelges tsugae) and beech leaf disease complex." (https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2837)

Climate change: A warming climate with more intense and more frequent storms and droughts is threatening some trees.

Trail expansion: The potential NPS widening of the paved, multi-use Mount Vernon Trail, over two miles through Dyke Marsh, could destroy many trees, further fragment forests, impair habitat and increase invasive plants and polluted runoff. See "Expressing Concerns about Widening the Mount Vernon Trail," https://www.fodm.org/about/taking-action.html.

Land use decisions: Existing land use policies and practices by local, state and federal governments that give inadequate consideration to environmental impacts have degraded the area and absent stronger policies, can further impair the area's finite natural resources.

Why Care about Trees?

The health of the parkway's trees and forests affects the overall health of the area's natural resources and human health. It's all connected.

Among other ecological services, trees stem runoff, stabilize soils and absorb excess nutrients from runoff. Trees are "carbon sinks," consuming more carbon dioxide, a greenhouse or heat-trapping gas, than they emit. Trees absorb other pollutants like ozone, carbon monoxide and sulfur dioxide.

Fall colors along the GW Memorial Parkway and the Potomac River Photo by the National Park Service

Trees can even reduce stress. A University of Illinois study found that hospital patients recovered from surgery more quickly when they could see trees outside their window.

Trees are habitat for birds, insects, small mammals and other wildlife. Oak trees are "the most productive plant in this country," says University of Delaware entomologist Dr. Doug Tallamy. Over 900 species of moths and butterflies use oaks. "Caterpillars transfer more energy from plants to other animals than any other type of creature," he said.

Healthy forests affect area bird populations. ". . . bird populations were healthiest where surrounding land was mostly forest. . . these small parks are still providing good habitat for birds of all feathers." (www.nps.gov/orgs/1465/birds-reveal-how-small-mid-atlantic-parks-have-outsized-protective-punch.htm)

Historic Character

The parkway's trees and forests are part of the fundamental character of the parkway, as intended by Congress when it authorized it by law. Unlike today's modern highways, nature is a central element.

Planners of the parkway envisioned a unique roadway to preserve and enhance the Potomac River valley, to keep the river's banks in public ownership and to pay tribute to George Washington by creating a grand gateway to his home, Mount Vernon. It is a slow-speed thoroughfare, that combines the natural, historic and recreational sites with over 7,000 acres of parkland along its 40 miles mostly paralleling the Potomac River shoreline.

The road's design is integrated with the undulating terrain, follows natural contours, winds in gentle curves and features natural areas and scenic vistas of the Potomac River. NPS has planted over 250,000 trees, shrubs and vines over the years.

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Rich Biodiversity

Today, for an urban park, the parkway is especially rich in biodiversity. Observers have documented 294 species of birds, 35 mammals, 25 reptiles, 22 amphibians, 81 butterflies, 785 moths, 207 arachnids, 172 bees, 73 dragonflies and damselflies, 111 caddisflies, 1,487 beetles, 62 fish, 84 mollusks, and 48 crustaceans, 59 ants, 323 flies, 180 sawflies and 50 crickets, grasshoppers and katydids.

Strengthen Forest Management

The National Park Service commissioned Virginia Tech foresters to assess the parkway's forests and prepare a management plan. The study focuses on expanded forest inventory and monitoring; tree planting, maintenance and protection; forest edge management; a vegetation succession strategy; and management capacity-building. We look forward to this study and NPS's response.

GWMP's Management

Despite our objections, GWMP crews continue to mow along the Haul Road Trail indiscriminately and have cut down native plants and tree saplings. On June 29, we found three native smooth sumac trees apparently cut down by a hand saw. GWMP staff could not explain who was responsible.

Meanwhile, we received reports that NPS cut down over 1,000 trees for the north parkway construction and cleared eight acres of trees at Daingerfield Island. When we asked GWMP to confirm this report, on the north parkway construction, Christopher Hershey, GWMP Chief of Staff, construction, Christopher Hershey, GWMP Chief of Staff, wrote on September 11, that GWMP prepared an environmental assessment (EA) at https://parkplanning.nps.gov/document.cfm?parkID=186&projectID=65603&documentID=88835 that included "mitigation measures such as replacing impacted trees and shrubs on a one-to-one diameter at breast height (dbh) ratio to minimize environmental impact. Any tree removal is conducted in compliance with these guidelines to ensure safety and preserve the park's natural landscape.

"Additionally, the public engagement process for the EA has been fully completed, with transparency and collaboration at every stage. Our approach has remained consistent with these objectives, ensuring all decisions are made openly and in line with environmental protection standards.

"Maintaining positive, collaborative relationships with our friends' groups is an important aspect of preserving the parkway's future. We value the opportunity to work together and share accurate information with both the public and our partners, ensuring that we are aligned in our shared mission to protect the environment."

Acting Superintendent Christine Smith said, "Our top priority remains the safety and preservation of the parkway for the visiting public, but we are equally dedicated to protecting its natural beauty. Any necessary tree removal is paired with extensive replanting efforts to maintain the park's ecological balance."

"The best time to plant a tree was 20 years ago. The second best time is now." Chinese Proverb

New Bridge and Viewing Platform

National Park Service (NPS) officials held a ribbon-cutting on May 19 for the rebuilt, 1,070-foot bridge 23 which crosses what some call the "Big Gut" across from the Tulane Drive parkway turnoff. This bridge is one of the best sites to study the wetland's resources, now from a slightly enlarged viewing platform.

NPS's press release explained, "Each bridge section was built individually, with construction equipment on top of the previously installed sections. To eliminate the need for construction equipment to drive over the marsh, new sections were then added from the top of the bridge, bypassing the standard approach of building up from the bottom."

We are pleased that NPS did not expand the underlying footprint of the bridge and for avoiding construction activity during the bird breeding and nesting season in 2023. Barn swallows (*Hirundo rustica*) have historically built nests under this bridge. This summer, Todd Kiraly confirmed two active nests with hatchlings there.

We are still hoping NPS will conduct a study of bicycles' and other vehicles' speeds on the Mount Vernon Trail. The trail is a multi-use trail, not exclusively a bike trail. Many people observe nature, conduct bird and other surveys, walk and generally enjoy the outdoors on the bridge. FODM has for ten years treated 18 pumpkin ash trees near the bridge to save them from the invasive emerald ash borer. While making bridges safe is necessary, we believe NPS must minimize infrastructure's footprint.

To read our related comments on NPS's Mount Vernon Trail construction, visit https://www.fodm.org/images/GWMParkwayRehabEAFODMOct2023.pdf

Ribbon-cutting ceremony Photo by Robert Smith

TWO-HORNED CHESTNUT FROM PAGE **12**

The seed pods have two sharp spines that are barbed like a fishhook or velcro. This allows them to hitchhike among waterbodies on the feathers of water birds, such as Canada geese. The seed will pierce a foot if stepped on.

Once established, this plant clogs areas of slow-flowing water, including marinas, and makes kayaking and canoeing difficult. Plants with fruits that entangle in propellers can be inadvertently transported by boat trailers to waterbodies far from the original site.

Fortunately, in 2023, the Virginia Department of Agriculture and Consumer Services (VDACS) and the Northern Virginia Soil and Water Conservation District funded control programs for ponds colonized by two-horned water chestnut. In 2024, Virginia declared this plant a Tier II noxious weed, which prohibits movement and sale within the state without a permit. Currently, most of the colonized ponds are under management plans. However, it takes several years of management to completely eradicate the plant. Management must occur before plants drop seeds for next year's crop and some seeds may remain dormant in the sediment for several years.

Harvesting two-horned water chestnut plants in Manassas Photo by Jie Min

I encourage everyone to learn how to identify it and if you see it, report it to the U.S. Geological Survey's Nonindigenous Aquatic Species website, https://nas.er.usgs.gov/m/report/ and to reportapest@vdacs.virginia.gov. You can reach me at nrybicki@usgs.gov.

Welcome New FODM Members

FODM welcomes our **new members**: Leslie Chernikoff-Berman and David Berman, David Culver, Sheila Delaney, Teresa Evans, Abigail Hopkins, Kelsey Horowitz, Rick Johnston, Edie Juno, Holley Kilcullen, Cynthia MacDonald, John McCormick, Patricia McHugh, Betsy McWhirt, Shefali Mehta, Holly Metcalf, Matthew Pratt, Cristina Prensky, Tom Pyke, Suma Singh, Donna Stauffer and Alisa Wong. We welcome our **new life member** Stephen Csontos and conversions to life membership, Martha Ellett and Leslie Overstreet.

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 $20 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 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 Invasive Two-Horned Water Chestnut Threatens the Potomac River

BY NANCY RYBICKI, U.S. Geological Survey Emerita and George Mason University Affiliate Professor

If you care about the ecological integrity of the Potomac River or like to boat, swim or fish or even just picnic on the shoreline, the looming threat of two-horned water chestnut (*Trapa bispinosa* var. *iinumai* Nakano) is not good news. The species, also known as two-horned trapa, is originally from Asia. It is spreading in Virginia and Maryland, with its epicenter in Fairfax County.

Once in a waterbody, it is capable of covering the shallows like a blanket within two or three years. In 2014, wildlife biologists observed a patch in the tidal Potomac River at Pohick Bay near Lorton. Starting then, the Virginia Department of Wildlife Resources harvested the plants annually and eradicated them by 2018. However, surveys in Fairfax County revealed it was harboring in regional ponds and lakes. The number of colonized ponds was doubling annually. At that rate, water chestnut plants were likely to again reach the Potomac River.

Two-horned water chestnut with pink flower Photo by Blythe Merritt

From an ecological perspective, the plant blocks light from reaching the river bottom, which kills beneficial aquatic plants on which many wildlife species depend.

SEE **TWO-HORNED CHESTNUT** ON PAGE **11**