CSI Plants
Unraveling Mysteries and Solving Crimes with Plants

FODM’s November 13 program will bring out the detective in all of us when Dr. Steven B. Carroll presents “CSI: Plants,” a talk exploring how plants have helped solve crimes, from kidnappings to murder. Analysts use botanical evidence like seeds, pollen and other plant material found at crime scenes or on suspects’ clothing and do plant toxin analysis and DNA sequencing, for example.

In one of America’s most famous kidnappings, of Charles Lindbergh, Jr., in 1932, a wood specialist was brought in to investigate a homemade ladder used in the kidnapping. Plant evidence was also important in the so-called “Lottery” kidnapping and murder in Australia. And we’ll hear about plant mysteries in the movie Psycho. But we don’t want to give it all away now.

Dr. Carroll, a botanist and plant ecologist, is the Director of Public Programs at the State Arboretum of Virginia and Blandy Experimental Farm. He co-authored Ecology for Gardeners, published by Timber Press, and has written for Fine Gardening, Groundwork, Southeast Conifer and other publications. He has a Ph.D. in botany from the University of Massachusetts.

We welcome as cosponsors of this program the American Horticultural Society, the Potowmack Chapter of the Virginia Native Plant Society and the Arlington/Alexandria Tree Stewards.

$25 Million to Restore Dyke Marsh

U.S. Secretary of Interior Sally Jewell on October 24 announced funding of $25 million to restore Dyke Marsh, which is eroding six to eight feet a year. The funds are part of the Obama Administration’s Hurricane Sandy Rebuilding Strategy and Climate Action Plan to build resilience by restoring natural features along shorelines and protect communities from future storms.

“What we witnessed during Hurricane Sandy was that our public lands and other natural areas are often the best defense against Mother Nature,” Jewell said. “By stabilizing marshes and beaches, restoring wetlands, and improving the resiliency of coastal areas, we not only create opportunities for people to connect with nature and support jobs through increased outdoor recreation, but we can also provide an effective buffer that protects local communities from powerful storm surges and devastating floods when a storm like Sandy hits.”

In a 2010 study, U.S. Geological Survey scientists concluded, “Analysis of field evidence, aerial photography, and published maps has revealed an accelerating rate of erosion and marsh loss at Dyke Marsh, which now appears to put at risk the short term survivability of this marsh. . . . This freshwater tidal marsh has shifted from a semi-stable net depositional environment (1864–1937) into a strongly erosional one.”

FODM has worked for many years to restore Dyke Marsh and thanks those at the National Park Service, the Department of Interior, Congressman Jim Moran and other elected officials for their support.

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New Board Member - Katherine Wychulis

Katherine Wychulis has joined FODM’s Board of Directors. An Arlington resident, Katherine is a lawyer who is looking forward to helping preserve and restore Dyke Marsh.

She teaches corporate and securities law classes in Georgetown University’s Paralegal Studies Program, and works as a freelance attorney. Katherine started her legal career at the Washington, D.C., law firm Hogan & Hartson (now known as Hogan Lovells) and was a lawyer at AOL for 13 years (1996 – 2009), serving as Vice President and Chief Corporate Counsel beginning in 2001. While at AOL, Katherine co-founded a pro bono legal clinic that continues today. Katherine also served on the Board of Directors (2000-2006) and as Secretary (2002-2005) of the Audubon Society of Northern Virginia (ASNV).

At the University of Virginia Law School, Katherine was the Managing Editor of the Virginia Environmental Law Journal. She received her bachelor’s degree from the College of William and Mary.

She enjoys bird watching, has participated in many surveys and volunteers with FODM’s annual breeding bird survey. Her favorite annual birding activity is the competitive, ASNV springtime Bird-a-thon, which she has done for 10 years or so. She especially enjoys birding while out walking with her husband, Mark, and hound dog, Oscar.

New Buoys Mark River Boundaries

BY ERIK OBERG, BIOLOGIST, NPS

On September 27, NPS's Natural Resources and Lands staff marked Dyke Marsh's federal boundary in the Potomac River with 11 buoys. This marks the end of four years of work to secure the approvals, permits and funding to help visitors see and understand the full extent of Dyke Marsh and how much land has eroded since the NPS began managing the marsh.

Working as a team, park staff safely moved and set over 3,300 pounds of concrete anchors, buoys and chain. With excellent satellite reception, anchors were placed within 17 inches of the target for every location. Each anchor was given enough chain to allow for site-specific water depth, anchor sinkage, tide and peak flood variation.

In addition to placing all 11 boundary buoys, NPS staff also gave assistance to U.S. Geological Survey researchers by extracting three soil cores from the marsh. These cores will be analyzed to provide a millennium-scale climate record of the region and supplement a new joint publication.

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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 editorial address above. Board members too, can receive mail at this address.

Special thanks to Duncan Hobart for managing our website (www.fodm.org), and to Paula Sullivan and Ed Eder for their photography contributions to The Marsh Wren and website.
President’s Message
Glenda C. Booth, President, Friends of Dyke Marsh

This fall, the ospreys departed and the shorebirds, warblers and other birds moved through. Alert commuters glancing at the mudflats at low tide spotted great egrets that had dispersed and left their natal areas. Now we look forward to waterfowl sporting their winter plumage. And it won’t be long before bald eagles begin their courtship!

There could hardly be more welcomed news for the Dyke Marsh Wildlife Preserve than the news we received on October 24 – the Department of Interior will provide $25 million to restore Dyke Marsh (see page 1). These funds come on top of the $2.5 million in National Airport mitigation funds to restore the promontory, phase one of the restoration. Many people deserve credit, including Congressman Jim Moran, NPS and Department of Interior officials, many local and state elected officials and numerous Dyke Marsh supporters.

We hope to see NPS’s proposed “preferred alternative” restoration plan and restoration underway soon. Given the accelerating rate of erosion in Dyke Marsh, it will be gone in 30 to 40 years if nothing is done. We will send FODMers for whom we have email addresses a notice when NPS releases the plan and seeks comments. Check our web site and Facebook page also.

Leaders Applaud Parks

At a September 29 celebration of one of our “sister” parks, Fort Hunt, supporters heard several leaders applaud national parks. Here are some examples:

- Congressman Jim Moran: Commending the new Friends of Fort Hunt Park, “. . . everything needs someone willing to stand up and speak out.”
- Congressman Gerry Connolly: “Every generation has a sacred obligation to preserve history.”
- Delegate Scott Surovell: Recalling his youth spent in Fort Hunt Park, in Dyke Marsh and along the parkway, “How lucky we are to have the George Washington Parkway. It is a huge asset. Dyke Marsh and the parkway are why people move here.”
- Jon Jarvis, Director, National Park Service: Now the eighteenth NPS director, Jarvis said that he started working in NPS in 1976. “NPS cannot do it alone. We need an army of volunteers. . . . We cannot think of national parks as all being out West.” He stressed that NPS wants to form new partnerships, particularly in urban areas and to help young people connect to parks.

Other elected officials who attended and spoke include Senator Adam Ebbin, Delegate Rob Krupicka and Mount Vernon School Board Member Dan Storck.

Wear and Tear – Monthly Traffic

A National Park Service survey of 2013 “traffic” on the Mount Vernon bicycle trail that goes through Dyke Marsh reveals some staggering numbers. At “mile 7,” the counter located in Dyke Marsh, there were 16,057 “trips” in January; 10,844 in February; and 17,106 in March. NPS says, “Number of users is difficult to determine with over a dozen ingress/egress points for the trail.” Some users may pass multiple counters. Do they understand the jewel they are zipping through?

Shortfalls

National park budgets have dropped 13 percent over the past three years and the nation’s 401 parks have a $12 billion (billion) maintenance backlog, reports the National Parks and Conservation Association. National parks are 1/15th of the federal budget and provide a $10 return for every $1.00 invested. (Virginia has 22 national parks attracting over 23 million visitors a year.)

No matter how many times I see the Ken Burns’ film, National Parks: America’s Best Idea, I am awed by our country’s natural wonders and our national park system. People in the film refer to “nature’s superlatives,” “the most magnificent places in America” and our “common treasures.” Yellowstone was the first national park in the entire world. Let’s protect -- and restore -- our “Yellowstone.”

We are now planning our 2014 activities. We welcome your suggestions.
BY EUGENE D. VINogradoff

During the 1950s, in addition to all its wildlife, Dyke Marsh had two human inhabitants: Mr. and Mrs. “Cigarette” Dodson. Cig was a trapper, mostly. He caught muskrats, beavers, and occasionally foxes and rabbits and sold their pelts. He also had a fishnet or two (The nets were held up by lines of wooden poles driven into the muddy bottom of the Potomac. The ice pulled them up each winter, so they had to be re-driven in the spring.), and he caught mostly white perch and carp. During the hunting season, Cig also had several duck blinds, which he rented out to folks like my dad, Eugene Vinogradoff, and me. But he told us that he made most of his money from trapping.

My dad and I went duck hunting with Cig in 1956 and 1957. When we shot a duck, Cig would send his dog -- a Chesapeake retriever -- to swim out and pull the duck back to shore.

When I grew older, my father told me that there were rumors among our neighbors that Cig had also made money as a bootlegger during Prohibition. But other than the rumors, I have no knowledge of that.

Cig and his wife lived in a wooden shack, with a tar-paper roof, built on top of a wooden barge located in the inlet just off shore from the "Cigarette Turnaround" on the George Washington Memorial Parkway, just north of Morningside Lane, today called Pipeline Bay by some. Their barge and shed were located on the south side of this inlet, tied by ropes to a couple of trees that grew on the shore (the shore was -- and still is -- high enough that it does not flood during normal high tides).

I visited Cig’s shack several times. It had a metal, wood-burning stove in it. It was one big room, with a small dining table, couch and beds against the back wall (i.e., the wall facing south, up against the shoreline).

I never used the bathroom, but of course, I know where it emptied . . . More “fertilizer” for the Dyke Marsh flora.

Cig drank bourbon and, as his nickname suggests, he smoked (we all did back then). In the afternoon and evening, he offered visitors a shot of bourbon, followed by a glass of water. Cig collected rain water and, when that ran short, he also took water from a spring on the shore.

I remember when Cig had to leave the marsh, although I don’t recall the year (early 1960s, I would guess). He had a small-ish outboard motor on the back of a skiff (i.e., a flat-bottom wooden rowboat) which was pushing from behind his barge with their shack on it. He and his wife set off down the Potomac River. I took my boat out and met them in the channel to say "goodbye." I remember that Cig said he did not know where they would land or settle. He was just going to play it day-by-day for a while, getting further and further down the river.

Field Trip Etiquette - A Guide

All of us enjoy nature walks and FODM has many expert leaders who take us out in the field and open our eyes to nature’s beauty and power. Dr. Edd Barrows, a Georgetown University entomologist who has done extensive research in Dyke Marsh, offers a few tips on field trip etiquette based on his and others’ observations. The overriding point is to be respectful to nature, trip leaders, fellow group members and others.

There are at least three types of nature walks typical in our area: the totally-guided walk, the partly-guided walk and the self-guided walk. Here are some important points for the totally-guided walk:

■ Keep up with the leader, pay attention, talk in turn and ask questions.
■ Be respectful of biota.
■ Stay on paths.
■ If you want to examine part of a plant more closely, consult with the leader. In most cases, if you really need part of a plant to examine more closely, take a very small part. If possible, cut it off with scissors or a pocket knife, don’t rip it off. In most cases, you don’t need to pick a flower to see it better. Just get down to its level. Leave the flower for pollinators and other people to enjoy.
■ Don’t pick up or swat at animals, like insects. Go to their level to see them. Don’t roll over logs or other objects as a general rule. This disturbs biota. If you do move a log or rock, for example, put it back where you found it. Many animals have hiding places under these objects and they are parts of territories or habitats for some animals.
■ Do not talk on cellphones or text message or engage other loud, distracting electronic devices.
■ The leader should wait for people to catch up before he/she starts discussing a subject.
■ Leaders should speak loudly enough to be heard by all and share all information with all participants.
■ Participants should try to keep up and not make others wait too long for people to catch up with leaders.

If you have other suggestions, let us know.
The Sky Above

BY BARRY SPERLING, FODM MEMBER

The bowl of the sky above can be as inviting as the northern cardinal in the bush or the spicebush butterfly along Dyke Marsh’s Haul Road path. On nature walks and other outings, most of us focus on what’s on the ground, what’s growing nearby and what’s flying or zipping around. But we can also observe what’s happening above us.

In the photo taken at Huntley Meadows Park (below), the cumulus congestus clouds extend above the trees, rising from the horizon. A good buildup shows that there is moisture in the middle layers of the atmosphere, sufficient to keep the rising column of air flying upward. Notice the wisps of cirrus clouds above that? Their moisture signals further support for the growth of these clouds as they thicken. When clouds like that appear, there is a good chance that someone in the Washington area will get a shower soon.

In the photograph above right, the dying marsh plants show that autumn has arrived. The dense cirrus overcast is the distant forerunner of an approaching extra-tropical storm, our normal form of low pressure area in these latitudes. Storms get larger as summer gives way to cold influxes from Canada. The cold clashes with the warm air stubbornly holding on from summer, setting up more powerful conflicts than we have had during the summer, when the contrasts were fewer. Of course, the reverse happens around here in late January and February as the first intrusions of warm air begin the fight to push back the entrenched cold air and we get the memorable storms of late winter.

As Hurricane Earl in 2010 plodded north (picture right), just off the southeast coast of the United States, converging air hits the central eyewall and is thrust violently upward. The influx causes a high-pressure area over the storm. Our extra-tropical storms, by contrast, have a low-pressure area in the upper air, offset a little to their west. The high pressure over the hurricane forces the moist air to stream out in all directions at high altitudes where the cold air makes streamers of ice crystals (cirrus clouds), such as you see in this picture taken at sunset. The storm is centered to the left as the camera is pointing west. Looking closely at the streamers on the right, you can see that those streamers are actually snowing, though this melts and then dries up before hitting the ground. Precipitation with this property of disappearing before hitting the ground is called virga.

On the FODM fall colors walk on the Haul Road in 2012, a beautiful halo surrounded the sun, a perfect circle of rainbow color (red on the inside) at a distance of 22° from that center. This was caused by cirro-stratus ice crystals (hexagonal prisms) kicked along by powerful Hurricane Sandy, which fooled me into thinking that it would rain sooner than the distant storm actually provided.

People who are artistically inclined and who look up frequently will be rewarded by great arrangements of clouds and colors. People who are scientifically inclined and who follow the sequence of cloud forms can try to make short-term weather predictions. The ecologically-inclined may want to think about why we have the weather we do and what plants and animals are here because of that weather. In contrast, places in the western desert with the same altitude and latitude as the Dyke Marsh Wildlife Preserve have vastly different biomes. If you are lucky enough to be inclined to all three ways of thinking -- perfect!
Meet the Plants of Dyke Marsh: Winter

BY PATRICIA P. SALAMONE

When you think of the marsh in winter, maybe plants aren’t the first thing that come to mind. The lush green of spring’s new growth, the bright colors of summer blossoms, and the tapestry of fall foliage are gone. But the plants are still there, and winter plants have a stark beauty of their own. The tracery of leafless branches against the sky, interestingly shaped seedpods, and gone-to-seed flowerheads backlit by the pale winter sun all contribute to the beauty of the marsh in winter.

Trees and shrubs are perhaps the most obvious plants in winter. There are a number of things to look for in identifying these when their leaves are gone. These include:

- **Twig patterns.** Are the twigs opposite each other or alternating along the branch? Only a few native tree species have opposite twigs, and the acronym MAD CAT can be used to help remember these: Maple, Ash, Dogwood, and CATalpa. Horse chestnuts and buckeyes also have opposite twigs; most other species have alternate twigs.
- **Bark.** Many trees have distinctive bark that can help in identification. For example, the black locust has deeply ridged bark; white ash bark has a braided appearance. Tulip poplar bark may have scars or “eyes” where lower branches have fallen off. The honey locust (non-native) looks like something out of a fairy tale, with large spiky thorns on its trunk and limbs.
- **Seedpods and berries.** Many plants retain distinctive seedpods or colorful berries into the winter. The sweet gum has intricate spiny round seedpods; the sycamore has smooth spherical seedpods. The tulip poplar’s seedpods reflect the shape of its unique flowers, and maple trees may retain lingering “helicopter” seedpods.

Some invasive exotic vines are noticeable in winter because of their green color; English ivy is evergreen and Japanese honeysuckle is semi-evergreen in the mid-Atlantic region. Few native vines retain their leaves or stay green in winter, but the thick hairy-looking poison ivy vines (“Vines with hair—be aware!”) are quite noticeable, and the heavy ropes of older grape vines are also very distinctive.

Many herbaceous plant “skeletons” remain into the winter (though by late in the season they may be beaten down by snow, rain, or wind). These include swamp milkweed with its crescent-shaped pods full of downy winged seeds, narrowleaf cattail with its exploding puffballs of seeds, swamp rose mallow with its large, lantern-shaped seed pods, evening primrose with its candelabra-like appearance, and New York ironweed with its fuzzy gone-to-seed flowerheads. And all are reminders that spring and summer will come again and the color will return.

For more information: There are numerous guides for identifying plants in winter. The following is a very short selection, focusing on herbaceous plants.

- **Weeds and Wildflowers in Winter**, by Lauren Brown.
- **Seedheads in the Garden**, by Noël Kingsbury. (The perspective of a garden designer; wonderful photos.)

Waterfowl, What to Expect this Fall and Winter

“Waterfowl responded to favorable habitat conditions with a strong breeding effort, especially on the prairies,” reports Ducks Unlimited (DU), citing the U.S. Fish and Wildlife Service’s surveys. The total breeding duck estimate in their survey area was 45.6 million birds, “a slight decrease from 2012, but tied with the 2011 estimate, which was the second-largest population on record.”

In terms of species, mallards breeding population was essentially unchanged from 2012 and 36 percent above the long-term average. American widgeon numbers rose 23 percent. Populations of ring-necked ducks and goldeneyes rose “significantly this year,” reports DU. Scap numbers fell by 20 percent and blue-winged teal, 16 percent. Northern pintails are below their long-term averages.

Some waterfowl breed in Virginia, such as wood ducks, mallards, black ducks and Canada geese. In Virginia, “Habitat conditions in Virginia during the spring of 2013 were fair to good,” wrote Ben Lewis, waterfowl biologist with the Virginia Department of Game and Inland Fisheries. He described waterfowl production in the state as “average.” Visit www.HuntFishVA.com for more details.

Lewis expressed concerns about declining wood duck population numbers in Virginia, reporting that breeding wood duck pairs declined from 20,000 in 2007 to 15,000 in...
Welcome New FODM Members

We welcome our New Regular Members: Ms. Eugenia Burkes, Jennifer James, Roger Miller, John Nutter, Renee Obrien, Holly Rosenfeld and Derek Walker. And a special thanks to regular member David Pearce, now a Life Member.

WATERFOWL (continued from page 6)

2008, to 10,000 in 2010 and 2011. For 2012, there was a slight increase to around 12,500 pairs and preliminary 2013 estimates seem similar to 2012, but well below the long-term average of 23,000 breeding pairs. His department is monitoring to try to better understand possible causes.

DU’s website says, “The majority of Atlantic Flyway waterfowl are raised in the boreal forest and Arctic of eastern Canada as well as in the Prairie Pothole Region, Great Lakes region, and northeastern United States. In the eastern survey area (eastern Ontario, Quebec, Atlantic Canada, Maine and northern New York), the most common ducks (in order of abundance) were ring-necked ducks, black ducks, mallards, goldeneyes, mergansers and green-winged teal.”

DU cautions that the habitats that support ducks continue to be threatened and lost. "The fact is that many of the waterfowl that fill the flyways each year are raised on unsecured habitats," DU Chief Executive Officer Dale Hall has said. "We must maintain our focus on protecting and restoring important waterfowl habitat across the birds’ range in order to see these kinds of numbers again in future wet years." See more information at http://www.ducks.org/hunting/migration/2013-waterfowl-forecast/page5/?poe=footer.

You might want to check out the Cornell Lab of Ornithology’s migration forecasts of birds on the move at http://birdcast.info/. It is frequently updated.

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. We encourage you to save paper (trees) and mailing costs by becoming a member or renewing your membership online at www.fodm.org. Just click on the “New Member” or “Renewal” button on our membership page to make your tax-deductible contribution by credit card or from your bank account securely through PayPal.

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. Renewal reminders will no longer be sent with The Marsh Wren. You will receive a separate notice by mail or by email when your renewal is due. Thank you for your continuing support of FODM.
The Brown Marmorated Stink Bug gets extraordinarily disproportionate press coverage in fall as this invasive Asiatic species from the Hemiptera order seeks refuge in houses as cool weather arrives, but few people know that it belongs to an order with great diversity which is well represented in Dyke Marsh. The order Hemiptera along with Homoptera are considered true bugs and number over 80,000 species including aphids, cicadas, leafhoppers, water boatmen, stinkbugs, scale insects and many more. Some of the Homoptera and Hemiptera are pests, destructive to plant and crops, and a few (the Kissing Bugs) can even transmit diseases such as Trypanosomiasis, which are serious public health problems for humans in areas of Latin America. I have selected four photos to glimpse the diversity and even beauty of some of the true bugs roaming Dyke Marsh. Behold: the Candy Striped Leafhopper, the Giant Wheel Bug, (Sucking the life out of a bumble bee), the Eastern Leaf footed Bug, and the fifth instar of the Florida Predatory Stink Bug (a gorgeous luminescent red and blue). These common insects pervade Dyke Marsh and have an important ecological impact on the Marsh.