

A quarterly newsletter for Volunteers and Friends
of the Friends of Patuxent Research Refuge, Inc.



FRIENDS OF PATUXENT

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Oct-Nov-Dec 2021

Reflecting Nature's Example

By Jennifer Greiner, Refuge Manager

Name the one “club” that is open to everyone, offers breathtaking views, unlimited excursions, tangible benefits for body and mind, and has no membership fee? “Nature” is correct! One of the bright spots of this challenging past year is that people discovered, or re-discovered, the natural world outside their back doors. The challenge now is to extend this awareness and learn from nature’s example of connectedness. During my first year as Refuge Manager at Patuxent, I witnessed silent indoor spaces closed to visitors juxtaposed with jam-packed parking lots, hiking trails and fishing piers. Humans, hungry for a break from the confinement of their homes, visited the refuge in droves! I was surprised how many I talked with told me they had lived in this area for years but were visiting Patuxent for the first time. This raises many questions: why hadn’t they visited before? What barriers, perceived or real, exist and how can we break those down? How can the refuge be more welcoming, safe, and inclusive to ensure that everyone wants to keep visiting? Refuge staff and I are working to find answers.

Somehow, the great outdoors has become viewed as something of a luxury that is separate from, rather than an intrinsic part of, everyday life for many Americans. Experiencing nature, even “nearby” nature, is



often seen as relying on (1) driving somewhere (often out of urban centers), (2) knowing things (trail locations, wildlife names, outdoor skills),

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Diana Ogilvie Recognized as Visitor Services Professional of the Year by USFWS

By Rich Dolesh,
Chair of the Board of Directors



Patuxent Research Refuge’s Visitor Services Ranger Diana Ogilvie was recently named Regional Visitor Services Professional of the Year for 2021 by the US Fish and Wildlife Service. For those of us who know Diana and see her tireless work ethic and cheerful presence at the refuge and in the National Wildlife Visitor Center, we know this award is fitting recognition for her outstanding work.

“When asked a question, or for help, Diana goes out of her way to give the

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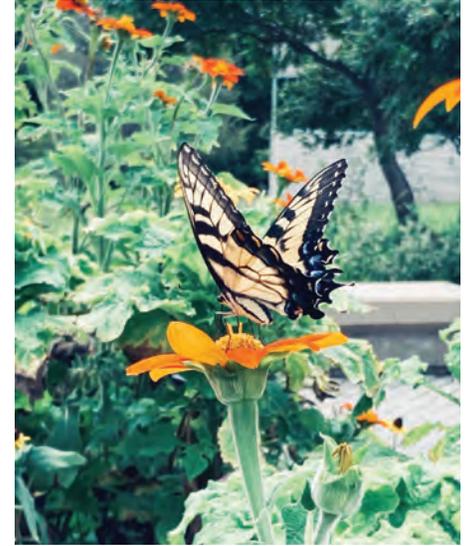
Reflecting Nature's Example

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or (3) possessing things (gear, maps, entrance passes). At the same time, part of the beauty of natural systems is their inter-connectedness, how the sum reflects the beauty of parts, each of which depends to some extent on another. Indigenous settlers along the Patuxent understood this; communities thrived on familiarity with the river and landscape draining to it. Natural systems are inherently diverse; can you imagine a forest with only one type of tree? A feeder that attracts only one type of bird? A garden with only one color? Lakes containing a single fish species?



As a community, we can learn a lot from nature's showcase...helping people feel less cut off and more connected to their outdoors and to each other. I'm looking forward to trying new things and finding new ways for the refuge to be a true asset for our local communities of Bowie, Laurel, South Laurel, Greenbelt, Beltsville and beyond. Over the past year, we've developed partnerships with Bowie State University; The Links, Inc.; Mobilize Green; Outdoor Afro; Environment of the Americas; Latino Outdoors; Hispanic Access Foundation; and Defensores de la Cuenca. We've found ways to continue delivering educational and



interpretive programs with community partners such as Anne Arundel and Prince George's County public libraries and public schools, the Laurel Boys & Girls Club, Boy Scouts of America, and Maryland Department of Natural Resources. We've worked to make the National Wildlife Visitor Center's back patio more welcoming with installation of shade sails, tables for nature journaling and reflection, and new spotting scopes. Our facilities crew has worked hard to refurbish the Cash Lake fishing pier, replace culverts, update signage, and resurface North Tract roads

for a much smoother ride. We're piloting new ways to celebrate variety and connect with people: mentored hunting and fishing events, hands-on science opportunities for youth, pollinator container garden planting, a Bird Festival during Latino Conservation Week, guided night hikes, monarch releases, birding demos and camping skills classes. These efforts are made possible thanks to generous time and support from volunteers, the Meade Natural Heritage Association, and the Board and members of the Friends of

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Friends of Patuxent is published quarterly and can be read online or mailed to our Friends upon request.

Many of the regular newsletter contributors and assistants are volunteers. However, we welcome and encourage all volunteers and Friends to submit items for the newsletter by sending or bringing them to:

Editor, Friends of Patuxent Newsletter
ATTN: Ross Feldner
 11811 Ivanhoe Street
 Wheaton, MD 20902

Or email to ross.feldner@verizon.net

All articles submitted to the Friends of Patuxent Newsletter will be reviewed by newsletter staff prior to their publication. We reserve the right to not publish submissions based on length, content or suitability.

Article submission deadlines:

Issue			Issue		
No.	Months	Deadline	No.	Months	Deadline
1	Jan-Mar	December 1	2	Apr-Jun	March 1
3	Jul-Sept	June 1	4	Oct-Dec	September 1

To become a member of the Friends of Patuxent or send a donation, please see "Membership Application" on page 11.

August Refuge Highlights

by Jason Cangelosi, Visitor Services Manager

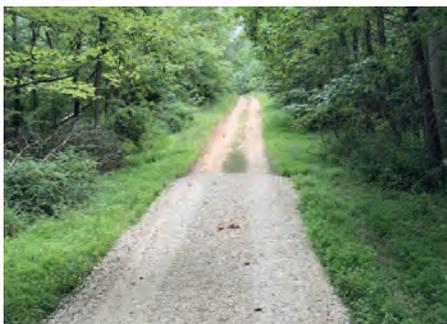
Field To Fork, Cooking Wild Game

On Saturday August 14th, in partnership with Outdoor Afro, Patuxent Research Refuge offered a Field to Fork, cooking wild game program. Wade Truong is a lifelong Virginian, self-taught chef and hunter. His work has been featured in the New York Times and Garden & Gun. Wade spent 3 hours teaching 15 participants how to prepare and cook wild game. The best part of the course was they all shared a delicious meal together that they prepared in the course. This program is part of a series of courses leading up to our first mentored diversity hunt.



Roadwork

On June 26, the 6-week roads project was completed. Maintenance worker Joe Greene and his team from regions 3, 4 & 5 finished up stellar improvements to over 16 miles of road at Patuxent Research Refuge's North Tract. The team persevered and problem solved through many unexpected challenges — from flat tires to thun-



USFWS employee Chris Deets leads folks in binocular use and bird identification.

USFWS Jennifer Greiner

derstorms — by relying on shared knowledge and expertise (and plenty of pizza, energy drinks and jokes). In total, the team spread 651 truckloads of recycled rock and gravel, totaling 14,200 tons. Because of the team's hard work, visitors will now enjoy smooth rides all over North Tract's beautiful forests. Many thanks to Joe's team, including Chuck Henschel from Potomac River Complex, Darren Stover from the Northeast regional office, Matt Pavlak from Rhode Island, Greg Owens from Back Bay, Mike Krug from Aroostook, Daryl Johnson from Caanan Valley, Kyle Goodge from Ohio River Islands, Ashley Cheung Patuxent Career Discovery Internship Program (CDIP) and Matt Dominski of Patuxent Research Refuge.

Latino Conservation Week, Bird Fest Event at Patuxent Research Refuge

The Latino Conservation Week kick-off celebration, Bird Fest, was held on Saturday July 17th. This was a collaborative event among Patuxent Research Refuge, USGS Eastern

Ecological Science Center Bird Banding Lab, USFWS Migratory Birds, Latino Outdoors, Hispanic Access Foundation, Friends of Patuxent, and Defensores de la Cuenca. There was a variety of stations for visitors to learn about birds. A bird walk was offered before the event to get families out on the refuge with binoculars to experience birding.

Patuxent Looking for the Endangered Mussel Yellow Lance

Submitted by Sandy Spencer, USFWS, Patuxent Research Refuge, Supervisory Wildlife Biologist

In late August, 2021, Chesapeake Bay Field Office (CBFO) biologists Julie Slacum, Kathleen Cullen, Leah Franzuebbers, and Dimitri Rucker joined Refuge biologist Sandy Spencer at Patuxent Research Refuge to collect water samples. The water samples will be used for eDNA analysis to determine if the federally endangered yellow lance (*Elliptio lanceolata*) is present

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Patuxent Bird Survey 2015, Forest Inventory 2017-2019 and Implications

by Sandy Spencer, Supervisory Wildlife Biologist, U.S Fish and Wildlife Service, Patuxent Research Refuge

In 2015, Patuxent Research Refuge and USGS organized a major breeding bird survey on the entire Patuxent Research Refuge, a repeat of 2008 and 1997 surveys. I was lucky to serve as one of the observers and organizers. Last year's Covid shut-down in 2020 gave me some much needed time to enter the over **13,000 observation records** into a national database (Avian Knowledge Network or AKN). Now the data can live outside of a dark forgotten file cabinet or on someone's old, lost hard drive, and be viewed, shared, and used by the interested public or researchers. The AKN will archive what birdlife was like here long after current staff, volunteers, and friends of the refuge are gone. The data entry was tedious, but allowed me to relive those days, see what others saw, appreciate the enormity of the effort, review the incredible bird life here at Patuxent, and inspired me to tell the story and meaningfulness of this survey. Link to AKN here: <https://avianknowledge.net/index.php/discover-and-download-data/>

How it was done—Although Patuxent is home to over 200 birds at different times of the year (two migration periods, breeding, wintering), we were primarily interested in who's breeding in its forests and other habitats. At this time, males are singing on territory and many can be identified by their song, call, or chip sounds emanating from dense leaf cover that visually obscures them. We were interested in species composition, species abundance and distribution, and in modeling occupancy as a function of seven habitat categories (deciduous forest, evergreen forest, woody wetland, scrub-shrub, wetland, meadow, and other). We were also interested in comparing results with the 2008 survey.



Figure 1. Kentucky Warbler (National Audubon Society).

The survey's sample design is based on the refuge's grid system covering the nearly 13,000 acres of the refuge. (We are indebted to Danny Bystrak and Ian Thomas who expanded the 100-meter historic grid system from Central and South Tracts to the newly acquired North Tract for a 1996 bird survey). Placed at every 4th grid intersection, there were 316 survey points in all, excluding some inaccessible sites and including the shooting ranges and their impact zones. These points were not handily accessed from roadsides, often requiring strenuous, long treks through deep forest, streams and wetlands, briars, or over many downed trees. Prior to start, points had to be reposted/flagged, observers had to be vetted/trained in ID skill and survey protocol, routes had to be described, points' coordinates loaded in the GPS units and GIS maps made, a schedule devised, and logistics for locked gates, road blockages, vehicles, and other issues figured out. As the project got underway, datasheets were distributed to and received from observers on a

near daily basis, raw data cleaned, corrected and entered daily into an Excel spreadsheet. Patuxent is most fortunate to have had already many skilled birders on staff. Fourteen observers set out every day from late May through mid-July. All points had to be visited more than once, usually 3-4 times, and not by the same observers. Over 900 visits were made.

Results—Ninety-seven species were detected, including 15 species of warblers. The wood thrush, a forest interior species of Greatest Conservation Need (SCGN) in Maryland, likes damp woodlands with an abundance of saplings. The figure on page 5 shows the distribution of wood thrushes and abundances per point (1, 2, 3, 4+). Kentucky warbler, another SCGN species, increased since 2008. These warblers prefer woodland undergrowth and dense upland ravines. The increase of both species *might* be explained by increasing forest cover or understory development. Shrub birds also benefited from the increased early succes-

Table 1. Distribution, observations and total individuals of selected SCGN species 2008 and 2015.

Species	2008			2015			Pts Detected Both Years
	# of Pts Detected	Total Obs	Total Indiv	# of Pts Detected	Total Obs	Total Indiv	
Ovenbird	225	671	409	246	878	455	274
Wood Thrush	201	621	392	239	794	440	284
Scarlet Tanager	173	297	219	203	345	250	266
Prairie Warbler	35	65	44	38	72	47	54
Kentucky Warbler	27	34	29	21	35	26	47
Worm-eating Warbler	17	18	17	35	49	35	43
Louisiana Waterthrush	17	23	21	18	20	19	32
Black-and-white Warbler	11	11	11	26	33	30	34



Figure 2. Wood thrush 2015.

sion acreage, though that is temporary. (Permanent shrub habitat is provided by the BGE and PEPCO transmission rights-of-way (ROW) and separate breeding bird surveys conducted in the BGE ROW 2012-2017 showed dense occupation there by shrub-dependent SCGN species prairie warbler and yellow breasted chat.) In 2008 there were 94 species, including the rare Northern bobwhite (not detected in 2015). Table

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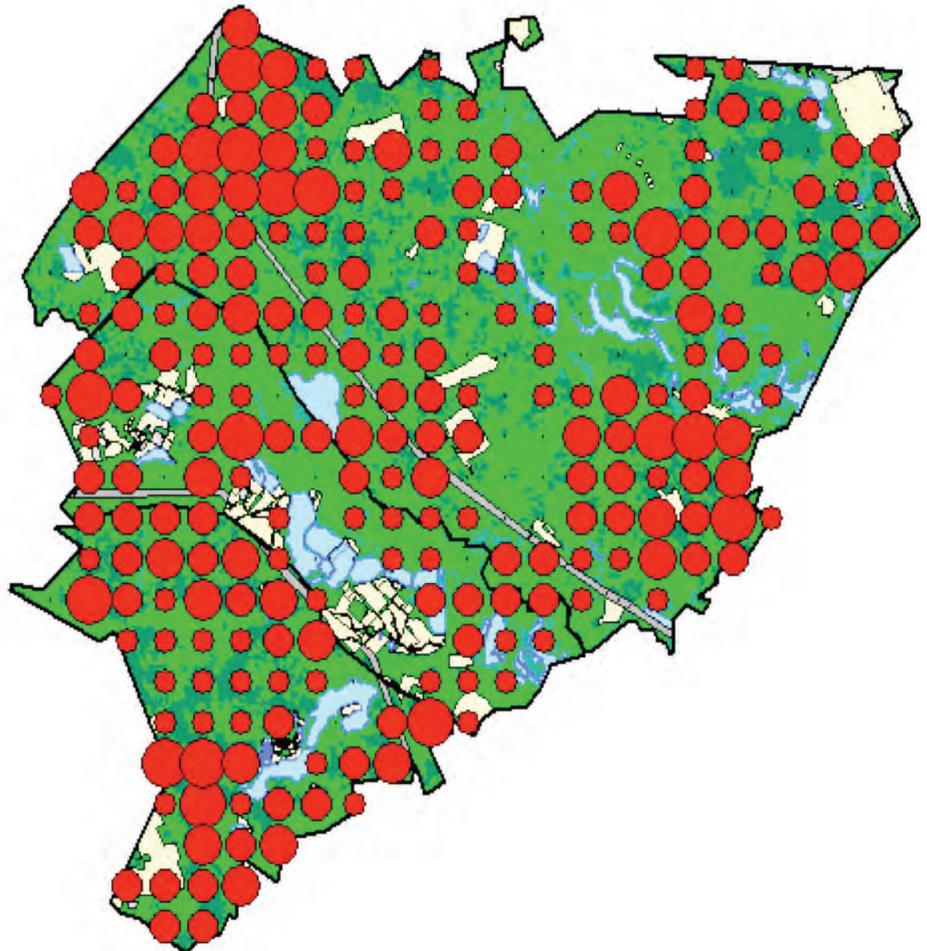


Figure 3. Wood thrush density on Patuxent 2015 (USGS).

Patuxent Research Refuge Fall 2021 Programs

NORTH TRACT PROGRAMS

230 Bald Eagle Drive
Laurel, MD 20724

BSA Personal Fitness Merit Badge

Sat., Sept. 18th, 9:00 am - 12:00 pm
Sat., Oct. 23rd, 9:00 am - 12:00 pm
Sat., Nov. 20th, 9:00 am - 12:00 pm

Ages 10+, registration required

Scouts must have a current BSA physical. The class is in need of a Scout Leader to volunteer for 2-Deep Leadership. Contact Elsie at misholler@gmail.com for homework and further instructions.

Interactive Nature Hike

Sat. Sept. 4th, 10:00 - 11:30 am
Sat. Sept. 11th, 10:00 - 11:30 am
Sat. Oct. 2nd, 10:00 - 11:30 am
Sat., Oct. 9th, 10:00 - 11:30 am

Ages 10+, registration required

Share your passion and knowledge of plants and animals as you traverse about 1 mile of the Forest Trail. Topics will include the history of North Tract, the role and importance of pollinators, the ecology and biodiversity within a forest habitat.

Night Hike

Fri., Oct. 15th, 6:30 - 8:30 pm

All ages, registration required

Join Ranger Jeff for an evening stroll on Merganser Pond Trail. Expect to see bats, possibly beaver, and hear lots of frogs and crickets. Bring a flash light if you wish.

Photo-Adventure Scavenger Hunt

Sat., Sept. 25th, 12:00 - 2:00 pm
Sat., Oct. 2nd, 12:00 - 2:00 pm
Sat., Oct. 9th, 12:00 - 2:00 pm

All ages, no registration

Using clues, hunt for sculptured stones, mystery objects, plants and



animals while learning about the history and features of the refuge. A camera or cell phone is needed to record your observations. Come when you wish and leave when you are ready. Requires short drives and walks.

Riding Bicycles to Experience North Tract

Sun., Oct. 17th, 10:00 am - 12:30 pm
Sun. Nov. 21st, 10:00 am - 12:30 pm

All ages, registration required

Enjoy a fall bicycle ride while experiencing the beauty of the natural area's local wildlife, plants and historical sites. Learn the importance of reducing your footprint and leaving no trace on the 12-mile guided bicycle ride. Bring your own bike, snack, water bottle and helmet. Ride is weather dependent.

Weed Warriors

Sat., Sept. 18th, 1:00 - 4:00 pm
Sat., Oct. 23rd, 1:00 - 4:00 pm
Sat., Nov. 20th, 1:00 - 4:00 pm

All ages, registration

Volunteers will remove invasive plant species from the refuge. A limited supply of tools will be on hand. Wear long pants, boots, gloves. Training on plant identification and removal will be provided. Parent(s) or Scout leader(s) must stay with youth at all times.

BSA Fish and Wildlife Management Merit Badge

Sun., Nov. 21st, 9:00 am - 3:00 pm

Ages 10-17, registration required

Contact Elsie at misholler@gmail.com for homework and further instructions. The class is in need of a Scout Leader to volunteer for 2-Deep Leadership.

SOUTH TRACT PROGRAMS

10901 Scarlet Tanager Loop
Laurel, MD 20708

B.A.R.K. Ranger Training

Sat., Sept. 18th, 2:00 - 3:00 pm
Sat., Oct. 23th, 2:00 - 3:00 pm

All ages, registration required

Does your dog enjoy walking the trails at Patuxent? Bring your dog to our new BARK Ranger training and upon completion your dog can monitor the trails as a certified B.A.R.K. Ranger. (Participating youth must be accompanied by an adult.)

Birding Basics

Sun. Sept. 19th, 8:00 - 9:30 am

Ages 7+, registration required

How do you use binoculars and identify birds? Join one of our local birders to be introduced to this hobby. Binoculars provided.

Become a Junior Wildlife Ranger!

Sat., Sept. 11th, 1:00 - 3:00 pm
Sat., Oct. 9th, 1:00 - 3:00 pm
Sat., Nov. 13th, 1:00 - 3:00 pm

Ages 6 - 10, registration required

Join a Refuge Ranger to explore 5 nature related activities. Complete your Junior Wildlife Ranger activity booklet and earn a JWR badge!

BSA Communication Merit Badge

Wed., Oct. 6th, 7:00 - 9:00 pm
Wed., Oct. 27th, 7:00 - 9:00 pm

Ages 10-17, registration required

Scouts must attend both sessions. The class is in need of a Scout Leader to volunteer for 2-Deep Leadership. Contact Elsie at misholler@gmail.com for homework and further instructions.

South Tract Programs Continued

BSA Emergency Preparedness Merit Badge

Wed., Sept. 8th, 7:00 - 9:00 pm
Wed., Sept. 29th, 7:00 - 9:00 pm

Ages 10-17, registration required

Scouts must have their first aid merit badge and attend both sessions. The class is in need of a Scout Leader to volunteer for 2-Deep Leadership. Contact Elsie at misholler@gmail.com for homework and further instructions.

Fall is Fabulous Activities Exhibit

Tues. - Sat., All of October,
9:00 am - 4:30 pm

Ages 3+, no registration

Fall is fabulous! Learn more about fall leaves and trees while enjoying self-guided hands-on activities, games and crafts in the Visitor Center lobby.

Learn to Fish

Sat., Sept. 11, 9:00-11:00 am

Ages 5 - 16, registration required

Learn to fish with an experienced angler at Patuxent's Lake Redington. All equipment provided.

Migration Madness Activities Exhibit

Tues. - Sat., All of September,
9:00 am - 4:30 pm

Ages 3+, no registration

September is migration time! Learn about migration while enjoying self-guided hands-on activities, games and crafts in the Visitor Center lobby area.

Owl & Kestrel

Sun., Sept. 5th, 1:30 - 2:30 pm
Sun., Sept. 26th, 1:30 - 2:30 pm
Sun., Oct. 10th, 1:30 - 2:30 pm
Sun., Nov. 7th, 1:30 - 2:30 pm

All ages, registration required

Meet two of North America's smallest birds of prey: the American Kestrel

and Eastern Screech Owl. Both expert hunters, the American Kestrel uses its acrobatic prowess, while the Eastern Screech Owl is a stealthy hunter.

Preparing for Winter Activities Exhibit

Tues. - Sat., All of November,
9:00 am - 4:30 pm

Ages 3+, no registration

Winter is coming! What do animals do to get ready? Learn the answer while you enjoy self-guided hands-on activities, games and crafts in the Visitor Center lobby.

Storytime - Nature Tales

Sat., Sept. 4th, 11:00 am - 12:00 pm
Sat., Sept. 18th, 11:00 am - 12:00 pm
Sat., Oct. 2nd, 11:00 am - 12:00 pm
Sat., Oct. 16th, 11:00 am - 12:00 pm
Sat., Nov. 6th, 11:00 am - 12:00 pm
Sat., Nov. 20th, 11:00 am - 12:00 pm

Ages 1 - 10, registration required

Join us for an old-fashioned outdoor story time and discover nature tales about the wildlife all around us.

The Secret Life of Chipmunks

Sat., Sept. 11th, 9:30 - 10:30 am
Sat., Sept. 18th, 4:00 - 5:00 pm
Sat., Oct. 9th, 9:30 - 10:30 am
Sat., Oct. 16th, 4:00 - 5:00 pm

All ages, registration required

What do chipmunks do to hide their food, find shelter, and select mates? Join Dr. Jenkins on this short walk, with some games and activities, and discover the world of chipmunks.

Urban Conservation Day

Sat., Oct. 2nd, 10:00 am - 2:00 pm

Come celebrate our conservation work in Laurel Maryland. This year we plan to have activities at both South Tract and North Tract. Details TBA.

GET TO KNOW OUR FRIENDS GROUP

The Friends of Patuxent Wildlife Research Center and Patuxent Research Refuge, Inc., is a tax-exempt, non-

profit organization, and was formed in 1992 to support the mission and programs of the Patuxent Research Refuge and the Patuxent Wildlife Research Center in Laurel, Maryland. Friends of Patuxent raise funds for educational programs, exhibits, and research. The focus of the research includes contaminants, migratory birds and studies of endangered species.



Friends of Patuxent.org

VOLUNTEER ON THE REFUGE

Volunteers assist with running the visitor center, maintaining the refuge, and supporting wildlife management. Want to learn more? Go to <https://go.usa.gov/xHMph>

REGISTRATION

Programs are free. Some programs require advance registration by calling 301-497-5887. Masks are required for attendees in accordance with State and Federal guidelines. Programs are subject to changes or cancellation due to weather or low participation. Please notify the refuge of any special needs so that you may be accommodated. Join our email list by contacting timothy_parker@fws.gov. More information can be found at: www.fws.gov/refuge/patuxent.



Around the Refuge

Photos by Matt Beziat, Patuxent Volunteer



Marsh At Cash Lake (South Tract)



Sunset At Cash Lake (South Tract)



Mabbott Pond (South Tract) Featured in Sierra Club's Daily Ray of Hope photo pool on flickr.



Dusk At Lake Redington (South Tract)



Sunset At Lake Redington (South Tract)



Canada Geese At Cash Lake (South Tract)

Hollingsworth Gallery Fall 2021

by Faith Leahy-Thielke, Patuxent Volunteer

Fall exhibits in the Visitor Center's gallery will feature two favorite "returnees": the Southern Comforters Quilt Guild in November, and Steve McDaniel in December along with Jon Boone in October, who had to be rescheduled twice due to COVID restrictions.

Jon Boone, now retired and living in Catonsville, has worn many hats: environmental scientist, writer, editor, academic, consultant, and watercolorist. He helped found the North American Bluebird Society, was an associate editor of the North American Birdlife, and was a consultant with the Roger Tory Peterson Institute in Jamestown, New York. His current focus is painting with transparent watercolor – using a limited palette to create portraits that "reveal essential character while seeking tonal harmony." Boone attributes his style and efforts to a wide range of creative influences. They include 18-19th century Asian watercolor prints; Canadian artist Fenwick Lansdown's vignettes; Dutch master, Vermeer; and renowned ornithologist Roger Peterson. Boone's past efforts have included careful and accurate "portraits" not only of people, but also birds, plants, buildings and abstracts. This latest work will surely be as fascinating.

Founded in Bowie in 1982, the **Southern Comforters Guild** has been a haven and an inspiration to local quilters for almost 40 years. Twice a month members and guests meet and greet and compare and learn – with speakers, workshops, and numerous other activities. Guild member and exhibit curator Barbara Dahlberg writes that pandemic-dictated zoom meetings have replaced the Wednesdays at CCPC (Christian Community Presbyterian

Church on Belair Drive in Bowie) but members hope to resume their "in person" gatherings soon with their approximately 55 members. Their November exhibit will feature nature and wildlife-themed quilts. The collection includes "art," "traditional," and "modern" quilts created by all levels of quilters from the professional to the novice. For current information, check out their website at www.southerncomforters.org.

McDaniel Photography of Manchester in Carroll County, Md. is the business of Angie and Steve McDaniel. Their website samples their work in three categories: "Landscapes and Scenics" features spectacular images up and down the East Coast – in Maryland and a number of other states including Hawaii. "Upclose and Personal" provides "macro" images of flowers, plants and insects. The third group, "Pollinators: Birds, Bees and Butterflies" focuses on the great variety of insects that help feed us with their own foraging.

McDaniel's intense interest in bees is on display in his images and his "talks" about them. His talks can be aimed at general audiences or more detailed for beekeepers. Titles include "Inside the World of the Honey Bee," "Love is in the Air," "Wildflowers of Maryland," "Keeping Your Bees Alive," "Catching the Impossible Swarm," "Producing Practically Perfect Honey and Beeswax," and many more.

All photographic images are copyrighted, but reproductions are available for sale.

All of the exhibitors are pleased that this fall, they will be able to hang their exhibits and visitors can come in to admire them. 🍯

August Refuge Highlights

Continued from page 3



Photos by K. Cullen

Figure 1 (top): Patuxent River sampling site with cardinal flower. (bottom): Kathleen Cullen, CBFO, and crew.

in any of the streams at the Refuge. Currently, the yellow lance is known to occur approximately 15 miles upstream. Since *Elliptio productus* and *E. complanata* have been found on the Refuge, we are now looking for the yellow lance. One study area of particular importance is the portion of the Refuge that may be impacted by the proposed superconducting magnetic levitation (Maglev) train, which would impact the Patuxent River and the Refuge. A total of 35 water samples from 8 different sites across the Refuge was collected and filtered. Samples will be sent to the Northeast Fishery Center (NEFC), and will be analyzed next year to determine presence of yellow lance. Before the samples can be analyzed, an eDNA marker for yellow lance will be developed and validated by the NEFC.

In September 2021, Maryland Department of Natural Resources and the Refuge biologist will also conduct in-river surveys for mussel communities at the same sites. We'll let you know what we find! 🍯

Patuxent Wild Rice: On the Refuge and the River

by Matthew C. Perry, Friends of Patuxent Board Member

When Patuxent Research Refuge was established in the late 1930s, there were no wild rice plants in the small wetlands on the property or on the tree-covered Patuxent River that formed the northern border of the refuge. South of the refuge lands, wild rice grew luxuriantly in open marshes, and the Patuxent River wild rice areas were famous as hunting grounds, especially for several species of the elusive rails. Early biologists, like Francis Uhler and Robert Stewart, Sr., were quick to introduce wild rice seeds to the numerous ponds and impoundments being created on the refuge between 1939 and 1956.

Wild rice flourished in the created wetlands and biologists Fran Uhler and Brooke Meanley documented in numerous food habits studies the value of the seed as food for wildlife. Many bird species utilized the wild rice seeds, but large populations of blackbirds, bobolinks, sora rails, and ducks were noticed on the river and some were soon taking advantage of the wild rice that was established on the created wetlands at the refuge.

In the 1960s, however, the wild rice stands on the refuge were declining and the cause of the decline was not readily known. Biologists at Patuxent also noticed declines in the huge stands of wild rice in areas south of the refuge, especially in the Jug Bay area of the Patuxent River. The cause of the decline was not immediately recognized and some researchers hypothesized it was due to the increased nutrients (eutrophication) that were noticed to effect stands of submerged aquatic vegetation (SAV) in the Chesapeake Bay and in other areas of the United States, like the Great Lakes.



Biologist Francis M. Uhler inspecting stand of wild rice plants on the edge of Snowden Pond, 1952.

Other researchers claimed the decline of wild rice stands on the Patuxent River was due to over competition by the very invasive plant, phragmites, which increased dramatically during the mid to late 1900s.

It was, however, also noted by Patuxent researcher Michael Haramis and his colleague, Greg Kearns, who worked at Patuxent River Park, managed by the Maryland National Capital Park and Planning Commission, that the resident geese could be the cause of the declining wild rice. Greg Kearns had been an intern in the 1980s at Patuxent Research Refuge and had a great thirst for knowledge. He and Mike decided to exclude geese with wire fencing from some small areas in the Jug Bay area to see what would happen. Their experiments were done with different size areas, wire mesh sizes, and distance of wire from the bottom.



Three small enclosures demonstrating growth of wild rice when geese are excluded, 1999.

Photo by Michael Haramis.

These variations were done to confirm that other species, like fish and crabs, were not causing the problem. To their amazement the areas where resident geese were excluded during the growing season flourished with wild rice, and areas outside the enclosures were denuded of rice. The photographs were ample proof that it was geese causing the decline of wild rice.

Simultaneously to their findings were the studies being done with resident mute swans, which were also eating SAV and the emerging wild rice seedlings in the spring and summer. It then became very obvious that resident geese and swans did not belong in the Chesapeake Bay Region in the growing season, and numerous actions were taken to reduce their numbers. Special September hunting seasons were established with resident geese, before the migratory geese arrived from Canada, and they proved to be effective in limiting the population and the resultant damage to wild rice. Maryland and Virginia state natural resources agencies worked together on special control programs to reduce mute swan numbers. The destruction of nests and the addling of eggs of geese and swans for many years by state personnel had proved ineffective and the direct killing of the birds was considered the only way to reduce their numbers.

In recent years large areas in the Patuxent River have been established with wire enclosures by Mike and Greg and have been effective in keeping geese and swans out, but not effecting the use of these areas by migratory ducks, rails, and passerines that take advantage of the great abundance of wild rice seed produced in these valuable habitats. Mike and Greg were benefited by the early Chesapeake biologists, like Uhler, Stewart, and Meanley, but it was their curiosity and persistent field research that finally solved the mystery of the disappearing wild rice marshes. 🍷



Wild rice growing inside goose enclosure in Jug Bay on the Patuxent River, 1999.



Mute swans eating wild rice seedlings during growing season on Lake Ontario.

Photo by Michael Haramis.

Photo by Michigan Department of Natural Resources.

Visit us on Facebook and Twitter
<https://www.facebook.com/P;atuxentResearchRefuge>
<https://twitter.com/USFWSNortheast/status/78546358377783296>

Patuxent Monarch Watch Program Conserves Monarch Butterflies

by Nishanth E. Sunny, Patuxent volunteer

Under the guidance and leadership of Barrie Hershkowitz, the Monarch Watch project at Patuxent Research Refuge helps conserve Monarch butterflies by rearing their eggs through the various caterpillar stages (instars), all the way to the mature butterfly. The butterflies are then set free to continue their migration south. When we release the butterflies, we engage the kids who are visiting the refuge to be a part of this process. It is a rewarding experience to see the joy on their faces when the Monarch butterflies fly away into the distance from their palms! 🦋



Photo credit: Nishanth E. Sunny

Ranger Diana Ogilvie Recently Named the Regional Visitor Services Professional of the Year for 2021

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person asking her undivided attention, to find an answer or solution or whatever,” says Jeanne Latham, refuge volunteer and former chair of the board of the Friends of Patuxent. “She is a terrific Refuge ambassador and fantastic representative of Patuxent. Diana provides excellent customer service, whether it be to a fellow park ranger, a refuge volunteer or Friends of Patuxent member. She is a great resource of information, which she readily shares and she is extremely friendly and welcoming. Diana is always respectful of others’ opinions and points of view as well as their feelings.”

Diana has a diverse set of responsibilities as part of the visitor services team at Patuxent. She develops programs and special events that regularly draw hundreds of people to the refuge. She is masterful in designing events that appeal to new visitors to the refuge and that draw diverse members of the public.

Patuxent is one of the Fish and Wildlife Service’s premier urban wildlife refuges and Diana has been particularly dedicated to the challenge of reaching out to members of local communities around the refuge and making the refuge’s events, programs and services more accessible to diverse audiences. During the time of Covid, Diana planned a highly successful outdoor, socially distanced Urban Wildlife Refuge Day for more than 300 participants as well as socially distanced fishing events for children and youth. In addition to urban refuge-focused activities at Patuxent, Diana has been instrumental in coordinating programs and events at nearby Masonville Cove, a unique urban wildlife refuge in Baltimore City.

One of Diana’s most significant and successful initiatives is her organizing and supervising of more than 100 refuge volunteers whose responsibilities range from assisting with support for special programs to planting wildflowers for native pollinators to conducting community science activities. When Helen Lowe Metzman, a member of the volunteer refuge Botanical Foray and Herbarium Team was involved in

the move of Patuxent’s historic herbarium from a building at the North Tract to the National Wildlife Visitor Center this year, she observed “how essential Diana was as a critical interface between the refuge staff and our volunteers. She is a tireless worker with positive energy, enthusiasm, patience, dedication, and truly deserving of the award.”

Jason Cangelosi, Visitor Services Manager and Diana’s supervisor at Patuxent says, “Her excitement for leading volunteers is unwavering. She can encourage volunteers to complete almost anything with her enthusiasm. Diana is continually seeking to further engage community members. They come in for a walk and end up a volunteer. She is so personable that she instantly connects and makes all feel welcome here at the Refuge.”

The Friends of Patuxent are truly grateful for Diana’s many contributions to the Patuxent Research Refuge and the people who visit, volunteer, and enjoy Patuxent. We offer our congratulations and commendation to Diana for being recognized as the Visitor Services Professional of the Year. Thank you, Diana! 🦋

Fort Meade Volunteers Are Really Cleaning Up!

by Jessica Mousley, Patuxent Volunteer

Photos from the Fort Mead volunteer clean up group cutting invasive Bradford Pear trees and doing trail maintenance. Good work for a good cause.



Patuxent Bird Survey 2015, Forest Inventory 2017-2019 and Implications

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1 (above) presents the results on a few species of interest (they are all SCGN species) and compares them with the 2008 survey.

Why do bird surveys matter?—This may seem a silly question...they tell us what's going on with bird populations or species. More importantly is the indication of the balance of nature's food web. Birds are honest--they go where the food is, leave where it isn't. Which leads to native plants and habitat quality. During the reproductive season, birds are relying on insects and 310 North American bird species prefer caterpillars, followed by spiders (Narango et al. 2018). (More lipids and proteins needed for egg manufacturing and chick rearing are found in arthropods than in seeds. Seeds and fruits are not available until late season anyway). Douglas Tallamy beautifully described the relationship between native plants and bird survival in *Bringing Nature Home*. Narango's study also found that populations could only be sustained if non-native plants constituted <30% of the plant biomass (Ibid.). Why is this? Because herbivorous insects co-evolved with native plants, and over 90% of herbivorous insects specialize on a few native plant lineages (ibid.), but are



Figure 4. Luna moth caterpillar (BugGuide.Net)

sparse on non-natives. So those fat, juicy, palatable caterpillars that birds seek are loaded on our native trees, shrubs, forbs, and grasses, but not on the non-natives. Birds in landscapes dominated by lawns and non-native ornamentals, typical of residential communities or built environments, have to forage over longer distances. Usher in the value of Patuxent's forest, shrub, meadow and wetland habitats, where natives dominate. In the Patuxent Forest Inventory of 2017-2019, which was conducted at all the same points as the 2015 bird survey, the oaks collectively (15 species plus hybrids) accounted for 26.7% of the basal area. Tallamy claims that oaks support over 500 species of lepidoptera (moths and butterflies) and their caterpillars. Now one begins to better understand why wood thrushes are so dense here! Add to the woods the variety of habi-

tat types that support native flowering forbs and grasses, especially for bees and lepidoptera that keep everything pollinated, and you've got a potent recipe for sustaining birdlife. Now how are our moths doing?

Acknowledgement: Grateful thanks to the observers, supporters, organizers, and data managers of the 2015 Patuxent bird survey: Matthew Anthony, Peter Blank, Danny Bystrak, Jane Chandler, Deanna Dawson, Jane and Fred Fallon, John Sauer, Daniel Niven, Jo Ann and Mikey Lutmerding, Keith Pardiek, Bruce Peterjohn, Matt Rogosky, and David Ziolkowski.

References:

D.L. Narango, D.W. Tallamy, P. Marra. 2018. Nonnative plants reduce population growth of an insectivorous bird. PNAS vol.115, no. 45, 11549-11554. 🍷

Friends of Patuxent is Now on Instagram!

Please follow us @friendsofpatuxent to see great photos from Patuxent.

If you'd like us to share your pictures, please message us on Instagram or email us at friendspr@friendsofpatuxent.org

Reflecting Nature's Example

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Patuxent. Be on the lookout for regular updates on these and other refuge happenings, starting with this issue of the newsletter.

I am inspired on a daily basis by the passion people show for Patuxent Research Refuge and am honored to be a part of this work. I hope you share my excitement as we look forward to doing many great things together as a community that reflects the inclusiveness of nature. 🌿



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FRIENDS OF PATUXENT BOARD MEETINGS

Friends Board meetings are currently held by Zoom at 4 pm. Dates for Board meetings for 2021 are: January 19, March 16, May 18, July 20, September 21, and October 19 (both Board and annual members meeting). Dates, locations, and times are subject to change.

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Friends of the Patuxent Wildlife Research Center and Patuxent Research Refuge, Inc. is a designated Section 501(c)(3) public charity. It is a membership organization whose mission is to financially support the research of the PWRC and the environmental education, outreach and recreational missions at the PRR. All contributions are tax deductible to the extent allowed by law. Our Maryland Charitable Organization Registration-2348.

Your membership/contribution helps support the mission and programs at Patuxent. You also receive the following benefits:

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- Sense of accomplishment in providing many opportunities for wildlife-related recreation, education and research

(Application on reverse side)