

FRIENDS OF PATUXENT

Vol. 26 • No. 3

www.friendsopatuxent.org

July-September 2015



Fountain of Youth Discovered at Patuxent?

Brad Knudsen, Refuge Manager

Well, maybe not quite. But - this summer you will notice a lot more youth - and young adults - running around Patuxent Research Refuge doing good things for wildlife conservation, our facilities, and for public use. That is because, despite recent policy interpretations hampering our ability to bring on youth through internships with a minimal stipend, we have taken advantage of other similar programs the Fish and Wildlife Service has in place.

From late May through mid-August, we will have three Career Discovery Internship Program (CDIP) participants working here - one with Facilities and two with our Visitor Services team. This program is paid for through our Regional Office, in collaboration with the Student Conservation Association (SCA). We will also have two Directorate Fellowship Program (DFP) interns working for us - one doing a variety of lepidoptera/pollinator studies for our Biology program, and the other working on schoolyard habitats in Fairfax County, VA - along with leading several mini-fishing events for the public on Thursday evenings in June and July. The DFP positions are funded by the Director's Office, also working through the SCA. (I know - a lot of acronyms to absorb!!). Then, of course, our very own SCA employee Becca Schulz will be here as well until her ap-

pointment runs out in mid-August, working with Visitor Services, primarily at the National Wildlife Visitor Center.

But our youth movement does not stop there! For the first time since the summer of 2012, we will also be hosting a Youth Conservation Corps (YCC) unit of six high school-aged youth and a crew leader. This, also, is funded through the Regional Office, bless their heart, as they continue supporting youth employment initiatives in the Region. Their "home base" will be the North Tract, where they will meet each morning before heading out to do trail maintenance, invasive species removal, fence removal, and many other labor-intensive and IMPORTANT projects throughout the refuge.

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Endangered Whooping Crane Celebrated at Patuxent

By Ken Lavish, Chair of the Friends Adopt A Whooper Committee, Janice Devine & Jeanne Latham, Committee Members, & Diana Ogilvie, Park Ranger, Volunteer Coordinator & Committee Member



This year's Magnificent Whooping Crane Month, May 2015, is declared a success! There was a great turn-out of visitors, especially for Kids' Day on May 9, to learn about Whooping Cranes (WC), migratory birds and other endangered animals.

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Fountain of Youth Discovered at Patuxent?

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Lastly, we recently agreed to host a Maryland Conservation Job Corps one day a week for five weeks beginning in late June. They will likely help our YCC crew with many of the tasks listed above. Many hands make light work!!

It should be a summer these young people never forget, and it is great to have this much help! Their enthusiasm and inquisitive nature are refreshing and can often reignite our own interests in what we may have either been taking for granted, or unable to focus on as we wade through e-mails and data calls and other everyday tasks that can keep us all too deskbound. We may see that Great Blue Heron or that box turtle or that Monarch Butterfly through exciting new eyes. For those youth living on-site, they have opportunities to network with other summer hires from USGS and each other, and learn what it is like to live in Queens, or rural Arkansas, or small-town Pennsylvania.

Let's help them take full advantage of what Patuxent has to offer. We, in turn, should take advantage of what they have to offer us - it may be the next best thing to discovering the Fountain of Youth! 

Saving the Monarch Presentation for Friends Members in July

On July 18, Rich Dolesh, Friends of Patuxent Vice-Chair, will talk about what you can do to save Monarch Butterflies, which are in danger of disappearing from North America. He will specifically address:

- How citizens and volunteers can get involved in this national conservation effort
- What refuges, parks, and other public lands can contribute to saving the Monarch
- Where and how to find information, resources, and fun activities for all ages.



Photo by Ross Feldner

You may be interested to know that in addition to serving on the Friends Board of Directors, Rich is also the Vice-President for Conservation and Parks of the National Parks and Recreation Association.

Here are the particulars:

Date and Time: Saturday, July 18 at 11 AM

Location: Environmental Education Building at North Tract, Bald Eagle Drive, Patuxent Research Refuge

Sign Up: Please register by calling 301-497-5887; you'll be asked for your membership number.

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

Many of the newsletter contributors and other assistants are volunteers. There are regular contributors, 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.

To become a member of the Friends of Patuxent or send a donation, please see "Membership Application" on page 19.

We invite you to join!

**Your membership/
 contribution helps
 support the mission and
 programs at Patuxent**



Plants Are Wildlife Too

A Quick Look at the Patuxent Research Refuge Herbarium

by Bill Harms, PRR Plant Inventory Coordinator

When people think of a wildlife refuge, they think of a place to observe types of wildlife such as birds, mammals, and other animals. Plants are all too often relegated to the background. However, they grow in the wild and are living, and so by definition, they are also wildlife. Additionally, were it not for the plants, animals would find it impossible to make a living. Plants are an integral part of the environment and deserve due consideration. The intent of this and future articles is to raise the awareness of the fascinating world of plants on the refuge specifically and the rest of the earth generally.



Bill Harms showing Ann Coren how he presses a specimen for inclusion in the herbarium.

The Patuxent Research Refuge is the home to a large variety of plant life. Since 1936, botanists have collected over 4,000 plant specimens from about 1,200 species of plants found on the refuge. To keep track of the plants on the refuge, a repository was established in the 1930's. This repository is called a herbarium and is located at the North Tract Contact Station.

Botanists collect specimens in the field and then place them between newsprint in a press for drying. The flat dried specimens are transferred to a mounting sheet to which a label with collection data is attached. The data includes details of when the plant specimen was collected, who collected the



Chang-tzu Lew standing next to one of the herbarium cabinets. 4000 specimens and counting.

specimen, and the name of the plant species. The specimen sheets are stored in cabinets and can be examined later by researchers.

A specimen sheet serves as a voucher because it documents the occurrence of the plant. In addition to attesting to the occurrence of a plant, plant specimen vouchers can document changes in populations of plants geographically and over time. They also provide a repository of genetic material.

In addition to the 4,000-plus specimens in the refuge's herbarium, about 3,000 duplicate specimens have been repositied at herbariums at other institutions including the Smithsonian's National Herbarium, the University of Maryland, and the University of Towson.

One question many people ask is, "What types of plants do you collect?" They want to know if we collect mosses, mushrooms/fungi, lichens, etc. The answer is no; we are focusing on vascular plants. However, it might

be possible to document these other types of organisms in the future.

Our herbarium is not accessible to the general public, but it can be made available to interested researchers, if prior arrangements are made.

In future articles, we will look at the history of plant collection on the refuge, and focus on different plant communities and plant species. 🐦

Plant Inventory Blog
<http://www.botanybill.info>

Upcoming Refuge Events!

Wildlife Conservation & Recreation Day

Patuxent Research Refuge, North Tract

August 15, 2015

10:00am-2:00pm

FREE • For All Ages

Come out and join refuge staff and volunteers as they demonstrate how to enjoy wildlife and learn about conservation! Explore and enjoy being in nature through children's crafts, live raptors, fishing, archery, firearm and dog retrieving demonstrations. All ages welcome. No registration necessary.

If you are interested in volunteering to help please contact Jeff Bolden at 301-497-5701 or jd_bolden@fws.gov.

*The North Tract is located on Rt. 198 between the Baltimore-Washington Parkway and Rt. 32.

Endangered Whooping Crane Celebrated at Patuxent

Continued from page 1

This was the second and best ever Magnificent Whooping Crane Month (MWCM). Our fantastic event was possible thanks to the planning, organization and hard work by the dedicated Adopt A Whooper Committee of Ken Lavish, Chair, Janice Devine, Frank Cockrell, Bob Privette, Diana Ogilvie and Jeanne Latham, in coordination with the enthusiastic and energetic Refuge staff. A big thank you to the many volunteers who helped on Kids' Day: Phyllis Yigdall, Debbie Phillips, Claudia Papillo, Frank Cockrell, Elizabeth Oswald, Ed Grimes, and Lucy Grimes. And many thanks go to the Refuge staff who helped on Kids' Day and throughout the month: Diana Ogilvie, Jenn Hill, Amy Shoop, and Dennis Hartnett.

So you can enjoy or revisit the MWCM activities, here are some of the highlights and photos we like to share.

The month started out with a terrific presentation Flight from Extinction: Restoring Whooping Cranes to North America by Dr. John French, Research Manager, Whooping Crane Program, Patuxent Wildlife Research Center (PWRC) on May 2. Dr. French discussed how Patuxent initiated its involvement in bringing back the cranes



Ken checks out the "Measure Up" display.

from the brink of extinction. He also talked about how the WC program evolved, to include the current parent rearing aspect of the program. [NOTE: On May 29, it was announced that Dr. French was selected as the new Center Director at PWRC, and he will start his new position on June 14. Congratulations Dr. French!]

Among the four amazing educational displays exhibited in the Visitor Center lobby was "Measure Up," an interactive display, where kids of all ages could "spread their wings" (arms) to see if they



Volunteer assists visitors at the craft table.

were as wide as the Whooping Crane wing span, which is 8 feet across. They could also see how tall they were compared to the 5 foot-tall Whooping Crane.

May 9th was Kids' Day for kids of all ages. There were puppet shows about Whooping Cranes; story times in the Whooping Crane pod in the exhibit area; a migratory bird puppet craft, endangered species scavenger hunt, games, prizes and lots more. Everyone seemed to have a fun time and learned lots about Whooping Cranes, migratory birds, and endangered animals.

On May 16, Ken Lavish, volunteer WC technician, shared with the audience "What It Is Like to Work with Baby Whooping Cranes." He talked about the challenges of working with the WC chicks and the joys of seeing them grow



Colleen Chase of Operation Migration tells about teaching WCs how to migrate.



The puppet show tells the Whooping Crane story.



Dr. Olsen helps a youngster try on “the costume” that technicians wear when they teach the Whooping Crane chicks.



Diana Ogilvie shares Story time in the Whooping Crane Pod.



Ken Lavish talks about helping little Whoopers grow up.

up. “From where to find food and water, to how accept an ultralight airplane as ‘dad,” Ken commented, “it is amazing how much the little whoopers have to learn from their surrogate parents.”

On May 23, Colleen Chase from Operation Migration was our guest speaker. She presented “Reintroduction of Whooping Cranes to Eastern North America: An Operation Migration Pilot’s Perspective.” Colleen stated that she was part of the 10 person team that guided the Whooping Cranes from Wisconsin to Florida to teach them the migration route. One fascinating fact she shared was that the team members live temporarily in RV’s at each stop and it takes up to 22 stops and 3 months to reach their southern destination, St. Marks National Wildlife Refuge in Florida.

Dr. Glenn Olsen, Patuxent Wildlife Research Center Veterinarian spoke on May 30 about “The Whooping Crane Parent Rearing Program at Patuxent.” Dr. Olsen stated that this fairly new program is already shedding light on the benefits of parent rearing, versus non-parent rearing. One amazing fact is that the parent-reared chicks seem to learn how to be protective, which means they’ll be able to defend the nest and young of their own in the future. 🦩

For more information on Patuxent Wildlife Research Center’s Whooping Crane Program, see: www.pwrc.usgs.gov/whoopers/.

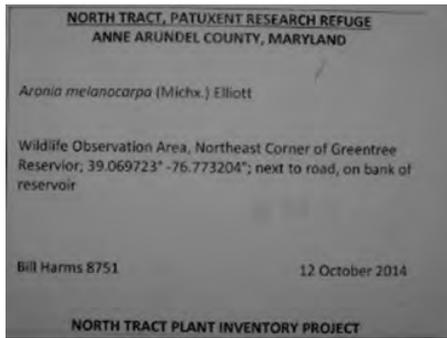
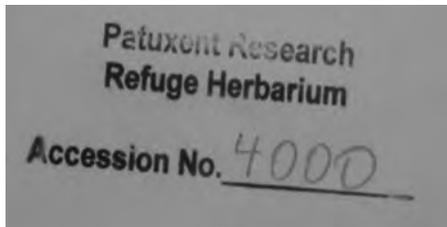
Milestone Reached at Refuge's Herbarium

4000th Specimen Voucher¹ Accessioned

Bill Harms - Refuge Plant Inventory Coordinator

The Patuxent Research Refuge Herbarium just recently passed a milestone when it accessioned its 4000th voucher specimen. The plant is a black chokecherry (*Aronia melanocarpa*) and was collected next to the Greentree Reservoir on 12 October 2014.

Hotchkiss et al collection 1936-1979	1627
Matt Perry photo vouchers	191
Current Refuge Plant Inventory Project -2010	2190
TOTAL	4008



The Refuge's herbarium now contains a total of 4,008 voucher specimens.

Additionally, 3,000 almost duplicate voucher specimens have been donated to the National Herbarium at the Smithsonian, the University of Maryland, and Towson University.

So far the current Plant Inventory Project has been limited to the North Tract. Beginning this year, the project has been expanded to include the South and Central Tracts, so we can expect to see the numbers to grow. Next time we will talk about what is a herbarium and a little bit about how they are used. 

¹ A voucher specimen is a pressed plant sample deposited for future reference. They supports research work and may be examined to verify the identity of the specific plant used in a study. (<http://www.flmnh.ufl.edu/herbarium/voucher.htm>)

Reminder: Friends of Patuxent Wildlife Holiday Bazaar

It's not too early to bring in donations for the 2015 Holiday Bazaar which will be held **November 14**. When you drop donations at the Visitor Center, PLEASE remember to fill out a donation form and make a copy for yourself. *We will NOT be accepting bed linens, posters, flat art or large frames.* The deadline for donations is **November 6**.

For more information contact Brenda Stone at stonesoop@comcast.net or 301-490-0384.

We're always looking for new and different vendors, preferably folks who have nature or wildlife-related merchandise.

Contact Jeanne Latham at jelatham@verizon.net or 410-212-2280 regarding vendors.



Volunteer Appreciation Picnic

Good food, good fun, good friends at the Volunteer Appreciation Picnic at the North Tract Wildlife Viewing Area in May.



Good food.



Good fun.



Good friends.

Meet the New Interns



Hello, my name is **Sonam Ahluwalia** and I am from Chesapeake, Virginia. I go to George Mason University, and I am currently working on a degree in Biology with interests in environmental policy and conservation. My favorite outdoor activities include hiking, canoeing, biking, and most of all, caving. As my love for nature grew, I decided to apply for an internship with the Student Conservation Association as a Career Discovery Intern partnered with the U.S. Fish and Wildlife Service. Through this internship, I hope to gain experience in environmental education, which will allow me to understand how to ignite public interest in conservation.

Hello, my name is Cornelius “CeeJay” Kilgore and I am from Dermott, Arkansas. Currently I am a junior at The University of Arkansas at Pine Bluff where I’m an Agriculture Business major. I enjoy outdoor activities such as fishing and hunting. While here at Patuxent as a Career Discovery Intern (Student Conservation Association), I will be working in Environmental Education. I am hoping to learn more about other ways I can help impact the natural environment so that we all can help make it a cleaner and safer place to live in.

Gallery Exhibits for Summer 2015

Faith Leahy-Thielke, Patuxent Volunteer

Summertime and the gallery's exhibitors are fascinating. In July, Hollingsworth hosts six members of the Taiwanese American Photo Club (TAPC). August heralds the return of Vernon Sears, a fine artist active in Veterans' affairs, and September introduces us to artist and teacher of Oriental brush painting, Jing-Jy Chen.

July's six photographers are all natives of Taiwan who have studied, lived and worked in this country for many years. Stephen Hung, active in engineering fields for 35 years, retired from the Department of Transportation in 2003. Five years later, following up on a lifelong love of photography, he founded the TAPC for the Greater Baltimore/Washington area. This frequent exhibitor - often a winning one - is contributing photos of native birds taken at wildlife refuges or national parks to the group's show.

Therese Hung's "resume" describes an expert in nutrition, child-raising and tax preparation! After settling in Frederick from NY State after husband Stephen's retirement, she began participating in TAPC activities. Her photos of wild ponies and waterfowl are from excursions to Assateague, Chincoteague and Great Falls.

Yud-Ren Chen is a former college professor and research leader for the US Department of Agriculture at the Beltsville Center. Since his 2007 retirement, he and his wife (our September artist!) have traveled extensively - locally, nationally and globally - often with TAPC members and photographed a great variety of subjects. His exhibit contribution will feature birds from Maryland and California.

Sung-Peng Hsu is also multi-talented. A university teacher of religion and philosophy, he "transformed himself," and became a computer programmer for medical devices that measure heart

and lung function. Retirement allowed time to explore with photography the human world as well as landscapes, flowers and wildlife.

Wen-Haur Huang, M.D., practiced pediatrics for 35 years before retiring and relocating to Maryland in 2007. He considers photography and travel with TAPC friends enjoyable and stimulating. Wild birds provide his contribution for this exhibit.

You-Yen Yang also pursued advanced studies here in the US. He's been a "candid photographer" for a "few decades," and describes his tutelage as "old school," i.e. "slow down and think about making an ordinary scene become an extraordinary one." But Yang also describes a penchant for quick clicking. This we all can easily rationalize - as he declares - there may never be a second chance for that shot. He'll contribute two osprey images from the Occoquan Bay National Wildlife Refuge - and a groundhog.

If you attended the Maryland Veterans Creative Arts Festival at the Bowie Center for the Performing Arts in April, you got a look at Vernon Sears award-winning oil pastel. His goldfinches were inspired by a flock of the beautiful birds in a suburban backyard. This Mount Rainier resident describes a TV show featuring illustrator John Gnagy as sparking his early interest in drawing. Gnagy taught that with the "ball, cube, cylinder and cone method" - 'Anyone Can Draw.' Sears found Gnagy's enthusiasm contagious. When he returned from service as a Marine in Vietnam, he began - at age 30 - to study at NY City's Academy of Fine Arts. Sears recalls with some awe being in the study room at the Metropolitan Museum of Art - able to observe Michelangelo's preparatory drawings for his "Libyan Sibyl." Yet, Sears also admired contemporaries

like Mort Drucker and Jack Davis - cartoonists for Mad Magazine. Now retired, although active in veterans' organizations, Sears has expanded his focus, both in media and subject matter. He enjoys photography as well as sketching, acrylics and oil pastels. We can expect wild animals added to his repertoire of birds and domestic beasts - and perhaps, microscopic ones as well. Sears is a "Cosmos" fan who is fascinated by Neil deGrasse Tyson's descriptions of the incredibly small in addition to the amazingly vast.

September gifts us with the Oriental brush painting artist and educator, Jing-Jy Chen. Although her "majors" at Taiwan Normal University and later at the University of Rochester were Chinese literature and education, Ms. Chen began painting during her college years. She describes her pieces as "studies in the balance between powerful brush strokes and negative space." She seeks to present a subject's internal spirit through bold brush strokes, simple lines, and a subtle and delicate use of water color. Her work is featured in numerous galleries throughout the year. Additionally, the long-time Howard County resident works as an Artist-in-Residence at Maryland schools. The art teacher at Crofton Woods Elementary School described one such experience. Chen introduced students to Asian art and the materials needed to create it. She taught the use and care of bamboo brushes and techniques with ink and watercolor. Students completed individual projects including fans, screens, kites, lanterns and scrolls. Additionally, they created group murals on rice paper for permanent in-school display. Wow! Patuxent will be treated to wildlife paintings created from her home studio in Laurel.

We look forward enthusiastically to all three months! 

Friends of Patuxent begin Monarch Butterfly Recovery Initiative

C. "Sparky" Sparks, Friends of Patuxent

The Friends of Patuxent's new committee, The Monarch Butterfly Recovery Initiative Committee, will join with the U.S. Fish and Wildlife Service, The National Wildlife Federation, The National Aquarium and Patuxent Research Refuge to help create more habitat areas and educational opportunities for the public.

Committee members include Friends board members; C. "Sparky" Sparks - Chair, Rod Burley, and Rich Dolesh. Others donating their time and expertise are Howard County master gardeners along with Patuxent volunteers, Ann Coren, Joe DiGiovanni, and Bill Harms, Patuxent's volunteer Plant Inventory Coordinator. Long time volunteers Jean and C. "Sparky" Sparks donated 96 native Maryland milkweed plants from Monarch Watch, which provided the committee with an opportunity to begin the recovery and educational initiative. Two species of milkweed (32 plants of *Asclepias incarnate*, Swamp milkweed; and 64



Asclepias syriaca, Common milkweed

plants of *Asclepias syriaca*, Common milkweed) were planted in the Wildlife Viewing Area of the North Tract and the School Yard Habitat and the National Wildlife Visitor Center by C. "Sparky" Sparks, Ann Coren, and Joe DiGiovanni. Initial plantings occurred on Saturday, May 23rd and Tuesday, May 26th, and are the start of new waystation areas for the Monarch butterfly.



Asclepias incarnate, Swamp milkweed



Even though these new plantings will not be used this year by the Monarch butterfly as host plants, they will still be useful as nectar for other pollinators. Next year, in the spring of 2016, the milkweed will look like the real thing when the Monarchs in the eastern flyway are on their northward migration to southern Canada and can be used as the host plant for the Monarch caterpillars. 🦋

Memorial Day on the North Tract

By D. Green, North Tract volunteer

It's springtime on Patuxent Research Refuge North Tract. Birds are singing and the blue bells are blooming. It's also the start of grass cutting and other outdoor maintenance activities. For one of its volunteers and ranger Jeff Bolden, USFWS, it's also the time to start the maintenance and reflection on the 9+ cemeteries that are on the North Tract.

Memorial Day on Patuxent Research Refuge North Tract is a day to remember those that lived and worked this land and still found time to serve in the military. Two days a year extra special care is given, Memorial Day and Veterans Day. On these two days extra attention is given like replacing worn flags, and picking up small twigs and branches. All but a few of the cemeteries are inaccessible to the general public.

According to the Internet, Memorial Day was started at the end of the Civil War and called Remembrance Day to honor our fallen veterans. Later it was modified to be a day of National Remembrance to all those that have passed away. Later on it was changed to Memorial Day. Veterans Day was established to honor all of our veterans.

The oldest burial, based on the date on the gravestone, is in the Snowden

cemetery. Wm. John Crowley died in 1748. The newest burial is in the St. Peter's Church Cemetery (also called Stuart Hill) for Kevin Waters in 2013. The newest cemetery was established sometime in the late 1950's as a cemetery for pets by the military at Ft. Meade. The earliest burial is for "Moochie" who died in Jan 1960 and was the pet of MSG Felix Marucha & family. The last burial was for "Sally" in 1974. This may be the last surviving pet cemetery that is on Ft. Meade. There were two Eagle Scout service projects (a census of cemeteries that were/are on Ft. Meade property) conducted by members of Boy Scout Troop 379 located on Ft. George Meade. Life Scout Andy Watcher did the first in 1977 and Life Scout Christopher Hileman in 1988. Their reports mention which cemeteries had name signs and which ones had a bullet hole(s). The cemeteries on the North Tract do not have name signs as of the date of this article. Many of the cemeteries reported by Watcher and Hileman are on Patuxent Research Refuge North Tract.

The names in the cemeteries are a cross-section of those who lived and worked the land long before the military came to this area. Names like Anderson, Hosfross, Queen, Snowden, Waters, Jacobs, Welsh, Woodward and

Donaldson to name a few. On some of the grave markers we can find out something about who is buried there. In the St Peters' cemetery we can see the graves of the Waters brothers: T. Leroy, Milton D. and Luther Welsh Waters, all veterans of WWI. In the Snowden cemetery, there is a plaque to Major Thomas Snowden placed by The Army-Navy Chapter of the D.A.R. At the corner of Whippoorwill Way in Area "W" there is a memorial plaque to Captain Dean K. Phillips, a Vietnam veteran. The plaque was presented by the Dean K. Phillips Memorial Chapter, Vietnam Veterans of America Inc., Chapter 227.

So as we take our hikes, do some bird-watching or just take the time to enjoy all that the North Tract has to offer, take the time to reflect on those that worked this land and made it a safer place.

On the north side of the refuge lie the graves of two sentry dogs "FALCO" (1965) and "Rinnie" (1968). On this Memorial Day it might be proper to say that U.S. Army sentry dogs "Falko" and "Rinnie" are still on duty watching over all. 🦅

Oil Pastel Demonstration

On Saturday, August 15, 2015, from 1:00-3:00 PM, Vernon Sears, the August artist of the month in the John Hollingsworth Gallery, will be offering a demonstration of the use of oil pastels as a medium for wildlife artwork at the National Wildlife Visitor Center.

This demonstration should be of interest to artists of all ages, but of particular interest to young beginning artists. There is no pre-registration nor charge for attendance.

We invite you to join!

**Your membership/
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Facilities Pollinator Garden



By Martin Brockman

The Service Building on Patuxent Research Refuge’s Central Tract, home to the USFWS and USGS maintenance staff offices, has a new pollinator garden. A handicapped accessible ramp was recently installed at the building entrance, and instead of replanting grass at the construction site, Facility Manager Martin Brockman decided that the site should go “green” with a pollinator garden.

He contacted volunteer Joe DiGiovanni, who is also a Howard County Master Gardener, to see if he was interested in doing the project for the refuge. Maintenance staff Rick Kreitzer, Tarik Adams and Adam Conger partnered with Pat Lamb of “Mother Nature and Me,” a local small business contractor, to construct the new handicap accessible



ramp using permeable pavers to reduce storm water runoff. A new aluminum railing was installed. Then they removed the earlier building construction debris (gravel, clay, hard-pan, and rocks), re-graded the slope of the site for planting, and brought in two loads of topsoil, which Joe and Rick spread out. Additionally, composted mulch was brought down from the North Tract to cover the soil to retain moisture.

As an alternative for an additional expense of buying Maryland-native plants for the garden, Joe used existing refuge plants for the garden. New England aster (*Symphyotrichum novae-angliae*), common boneset (*Eupatorium perfoliatum*), obedient plant (*Physostegia virginiana*), downy sunflower (*Helianthus mollis*) and mountain-mint (*Pycnanthemum* spp.) were planted. Black-eyed Susans (*Rudbeckia hirta*), butterfly

weed (*Asclepias tuberosa*) and other plants will be planted, once they’ve grown large enough for transplanting. Next year, additional plants will be added, most notably the common milkweed (*Asclepias syriaca*).

In addition to the pollinator friendly species of plants, a tree will be replanted in memory of Bruce Williams, a longtime Patuxent employee who made great contributions in the Endangered Species Captive Propagation Facility and to other Patuxent facilities. 🦋

Celebrating Pollinators at Wildlife Images

Bees, Bats, Butterflies, and More

By Pat Simons

This month Wildlife Images, the Friends of Patuxent bookstore in the Visitor Center, is highlighting a wide selection of books and other items specially selected to bring the busy world of pollinators alive. So drop in to the store and browse - whether you are interested in a children's book explaining the symbiotic relationship between Monarchs and milkweed, a comprehensive book on creating gardens that attract pollinators, or a cool and clever t-shirt.

Wearables: T-shirts, Caps, and Jewelry

The "Advice from..." caps and t-shirts have quickly become popular items for visitors. For September, the store will be featuring both "Advice from a Honey Bee" and "Advice from a Hummingbird" caps and t-shirts. A hint, the advice from a bee includes..."Create a buzz, Sip life's sweet moments, Mind your own beeswax, Bee yourself." For children there is a great selection of bat and butterfly glow-in-the-dark t-shirts.

Jabebo earrings (eco-friendly jewelry made from re-cycled cereal boxes) and Sienna Sky earrings (delicately etched in metal and hand-colored) include hummingbirds, butterflies, bees, dragonflies, birds, and more. Look closely at the Jabebo earrings and you'll see that the earring pairs are often not matched but rather complimentary images, for example a Monarch Butterfly is paired with a cocoon, a honey bee is paired with a hive.

Home and Garden

One of the prettiest items is a white china set decorated with a design of



honeycombs and blue bees. In stock, there is also a pedestal cake plate, a small dessert plate, a salt & pepper shaker set, a creamer, and small covered ring box. If instead you are looking for a distinctive coffee cup, the selection of Patuxent mugs includes butterflies, bats, and bird designs.

For your yard, fence, or garden, check out the "Butterfly Crossing," "Butterfly Garden," "Wildlife Sanctuary," and other metal signs. For indoors, how about a set of butterfly canvas prints? The prints come in soft pastel colors or in black & white.

Books

The store's selection of books for both adults and children continues to expand. Whether you need a "back to school" book or you are already thinking ahead to the holidays, plan to spend some time browsing the bookshelves. The following are just a few staff favorites.

Selected Books for Young Readers

Caterpillar Spring Butterfly Summer (Susan Hood), *Alphabetical Butterflies*

in Color (Lawrence Hohman), *Little Red Bat* (Carole Gerber), *Bee Life* (Small World books), *Honeybee Poems and Paintings* (Douglas Florian), *The Life Cycles of Butterflies* (Judy Burris & Wayne Richards), *Monarch and Milkweed* (Helen Frost and Leonid Gore), and *The Family Butterfly Book* (Rick Mikula). We also have a selection of activity, coloring, and sticker books.

Books for Beekeepers, Gardeners, and Naturalists

Bringing Nature Home (Douglas W. Tallamy), *Attracting Native Pollinators* (a Xerces Society Guide), *Beekeeping, A Seasonal Guide* (Ron Brown), *Nature's Little Wonders, Bees* (Candace Savage), *Grow a Butterfly Garden* (Wendy Potter-Springer), *Butterfly Gardening with Native Plants* (Christopher Kline), *A Spring without Bees* (Michael Schacker), and *Butterflies through Binoculars* (Jeffrey Glassberg). 🦋

Wildlife Images is open every day
11:00 a.m. - 4:00 p.m. (except
Thursdays and Federal Holidays).

July NABA Butterfly Count

Photo by Ross Feldner



MARK YOUR CALENDARS:

The 16th Annual West Anne Arundel County, North America Butterfly Association (NABA), butterfly count will be held on Saturday, July 11, 2015 (Rain date Saturday, July 18, 2015). Counters will meet at 8:00 AM at the Patuxent Research Refuge-North Tract, Visitor Contact Station at 230 Bald Eagle Drive, Laurel, MD 20724. The count will be held between 8:00AM and 5:00 PM, weather permitting. This butterfly count has been held annually

since 1999. For more information, contact count leader - C. "Sparky" Sparks at (home) 410-519-1550 or (daytime) 410-854-2859 or email - csparks007@verizon.net There are no age or skill restrictions, all levels of interest and experience welcome. *Please bring a field guide if you have one and plenty of water.* (Note: children under the age of 16 must be accompanied by parent or guardian.) Sign-up sheets will be posted at the North Tract Visitor Contact Station and at the National Wildlife Visitor Center.



Photo by Ross Feldner

The **NABA** count program has been held annually since 1975, when only 29 counts were held. In 2013, 451 counts were held in 44 U.S. states (including District of Columbia counted as a state), 27 Canadian provinces, but no Mexican counts were submitted. Volunteers around North America select a count area with a 15-mile diameter and conduct a one-day census of all butterflies observed within that circle. The counts are usually held in the few weeks before or after

early July, but the best timing for butterfly observation in each count circle varies. **The count program is intended to promote interest in butterflies and provide results useful for scientific monitoring of butterflies within North America.**

The NABA organizes the counts and publishes their annual reports. For more information on NABA and the count program, please send a self-addressed, stamped business envelope to: NABA, 4 Delaware Road, Morristown, NJ 07960. Or check out their website at www.naba.org. 🐦



Wildlife Photography Workshop

By Mike Goldberg, Volunteer
Mary Ann Hartnett,
Hollingsworth Gallery
Coordinator and Volunteer



On Saturday, February 28, 2015, Joseph Giitter, the artist of the month for the Hollingsworth Gallery, volunteered to share his tips on how to capture award-winning wildlife photos. His advice covered an overview of how to photograph wildlife while still being sensitive to them and their habitats, information on local areas to visit where wildlife subjects abound plus technical info on composition and design, appropriate use of wide-angle and telephoto lenses, and how to take advantage of available lighting. After a power point presentation and taking questions from the audience, Mr. Giitter led attendees to the Hollingsworth Gallery. There he spent time explaining where and how he was able to capture each of the amazing photographs that were on display. His generosity did not stop there. Mr. Giitter does his own printing, and permitted each of the 43 attendees to select a free test print to take home. In case you missed the February exhibit, or would like to view more of Mr. Giitter's work, check out www.bohemianphotoworks.com.

Fifty Years of Counting for the Birds: The North American Breeding Bird Survey

Keith Pardieck & Dave Ziolkowski



It was on a sunny, 70 degree morning nearly 50 years ago that the federal government's flagship wildlife surveillance program was born. That was when, at exactly 5:02 a.m. on May 24, 1966, an observer put pen to paper to record the first official data for the North American Breeding Bird Survey (BBS) - a time long before the terms "citizen science" and "crowd sourcing" had entered our common vernacular.

USFWS biologist Chandler Robbins who was prescient in recognizing the potential of harnessing the skills of birders across the continent, developed a survey to answer one simple question: How are bird populations faring across North America? This was 4 years after the groundbreaking release of Rachel Carson's *Silent Spring*, so naturally resource managers and the public were anxious to know how birds were faring in the face of widespread use of modern synthetic pesticides, like DDT.

Each BBS participant surveys along a roadside route and, in that first year, nearly 600 routes were sampled in the eastern U.S. and southeastern Canada. By 1968, the survey had expanded to include all of the continental U.S. and Canadian provinces. Today more than 3,100 routes are surveyed under the joint coordination of staff

Since its inception, the BBS has become widely recognized as the primary source of long-term, large-scale population data for over 400 North American breeding bird species.

from the USGS Patuxent Wildlife Research Center and the Canadian Wildlife Service. The government of Mexico has also partnered with the BBS, and routes are being sampled in the north of that country too; a significant step towards making the BBS a fully North American program!

Since its inception, the BBS has become widely recognized as the primary source of long-term, large-scale population data for over 400 North American breeding bird species. No other single resource provides as much scientifically defensible data regarding population trends of the continent's breeding bird populations as the BBS. Many federal and state wildlife agencies, non-governmental organizations, and academic institutions depend on the survey's annual results to assess bird conservation pri-

orities and to tackle some of the biggest problems facing birds and the environment through science-based policy, planning, and management. Peer-reviewed articles appear regularly in scientific journals illustrating myriad ways that BBS data are applied to questions far beyond the originally intended purpose of estimating population trends. More than 550 peer-reviewed publications feature work wherein researchers used BBS data as their primary means of answering a range of questions spanning everything from predator-prey dynamics to climate change, range expansions to invasive species, and niche modeling to epidemiology.

In celebration of this 50-year milestone, we are organizing a number of events that will take place in 2016, the year when we will actually have 50 years of data on hand to work with. More information will be forthcoming on our website but at least one major event is in the works, a symposium at the North American Ornithological Conference scheduled for August of 2016. Please stop by to say hello if you are there! Of course, you don't have to wait that long if you want to see BBS results - as always, they're available anytime with the click of a mouse on our website: www.pwrc.usgs.gov/bbs.

Our thanks and deep appreciation go out to the more than 9,500 observers who have conducted surveys over the last half-century, with special thanks to those few observers who have been with the BBS since the beginning, including Patuxent's own Danny Bystrak! Every observer and coordinator, whether running one route or many, has made the BBS the important bird conservation tool that it is today, and we're looking forward to an equally productive future! 🐦

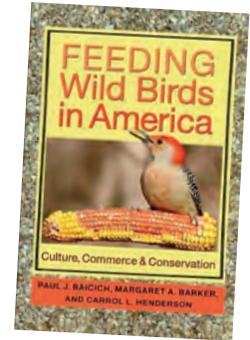
Book Review

Richard J. Dolesh

Feeding Wild Birds in America: Culture, Commerce & Conservation

Authors: Paul J. Baicich, Margaret A. Barker, and Carrol L. Henderson

Texas A&M University Press, College Station, TX. ©2015, www.tamupress.com



If you are one of the 50 million Americans who feed birds, the chances are good that you will find something of genuine interest in the delightful new book “Feeding Wild Birds in North America” by Paul Baicich, Margaret Barker and Carrol Henderson. First begun as a very brief history of wild bird feeding in North America that was commissioned by the Wild Bird Centers of America, the project grew into a book that is a fascinating history of the “Culture, Commerce, and Conservation” aspects of how the feeding of wild birds began over 120 years ago as a hobby by do-good nature lovers that was eventually capitalized on by the grain industry and which now has evolved into a \$3 billion dollar per year business.

The references to the early proponents of feeding wild birds reads like a who’s who of the history of the U.S. Biological Survey and the U.S. Department of Agriculture; and the contemporary references name some of the most respected nature writers and conservationists of our time.

Feeding Wild Birds is a treasure trove of information of little known facts about the history of the bird protection movement, the ingenuity of the first bird-feeder designs, and messaging of early advertising to sell bird feeders beginning in the 1900’s. Feeding Wild Birds traces the development of bird feeding and the bird feeding industry beginning in 1900, decade by decade, up through present day. The history is fascinating—from the earliest suggestions to feed wild birds by Florence Merriam Bailey (sister of C. Hart Merriam) in 1889, through the 1920’s when bird-feeding for fun and enjoyment became well-established in the U.S., through the hard times of the Depression era, through the post-War pe-

riod, through the 60’s, 70’s, 80’s and 90’s to present day where bird feeding has indeed become a big business.

There are genuinely interesting diversions interspersed with the chronological history of bird feeding, such as how suet became a staple for backyard bird feeders and how young Roger Tory Peterson turbo-charged bird watching and identification with the publication of his Field Guide to the Birds. You’ll learn how “Hemp, the Devil’s Birdseed,” became demonized, and how squirrels were recognized as far back as 1918

as being able to “surmount almost any contrivance the may be invented to block [their] passage.”

Bird feeding today has become a four season occupation of millions of Americans who find great joy and satisfaction in watching and feeding backyard birds. Perusing the pages of Feeding Wild Birds in America as you sit by a window near your bird feeder is guaranteed to enhance that satisfaction and teach you much you never knew about the history and practice of feeding wild birds.

Youth in Action - Catonsville High School Students “Go Outside” to Help the Refuge

Diana Ogilvie

In the spirit of the USFWS *Let’s Go Outside* and the First Lady’s *Let’s Move* campaigns, 14 students from Catonsville High School broke from their regular routine and traveled out to the refuge to connect with nature while they spruced up our trails.

Using pitch forks, shovels and rakes, students conscientiously loaded mulch into wheelbarrows and spread it along the Fire Road Trail, periodically taking a break from the sun by stepping into the forest’s natural “air conditioning.”

While out on the trail, students were excited to see wildlife that lives in and around the forest, including toads, various birds and insects, a large millipede and a 5-lined skink.

After cleanup and a quick lunch, it was back to school for the student volunteers, refreshed and rejuvenated by their time spent outside. Many thanks to the Catonsville High School students for their help with refuge trail maintenance.



Youth in Action - University of Maryland College Park Scholars Help Restore Habitat

By Diana Ogilvie and Zach Cravens, (photos by Diana Ogilvie)

Sunday, March 29, dawned sunny and cold, weather that might have discouraged the faint of heart. This work day had been planned weeks earlier as a service project for the University of Maryland College Park Scholars Environmental group. Would they attend as promised?

At 10:00 am sharp, their van, filled with sleepy but curious students, arrived at the North Tract contact station. The group was joined by another student from a local high school and his parent. Once essential paperwork was in order, we transferred to a refuge vehicle for transport over pothole-filled roads to the work site. Biological Technician Zachary Cravens and Park Ranger Diana Ogilvie presented background information about the refuge and explained the work project goals while the students' advisor dutifully kept notes for a "quiz" later on.

We are managing for darkling beetles, tiger beetles and native bees by maintaining savanna-like habitat comprised of pitch pine-oak overstory with grass for understory and pockets of bare sandy ground. Warren Steiner identified the area as important in 1995. He has since identified 64 species from the family Tenebrionidae (darkling beetle) in the savanna area and other sandy pockets on the refuge. Many of the species are locally rare or disjunct populations. The refuge is the only known location from NJ Pine Barrens to NC Sandhills of some of the species.

The area has been termed a "micro-desert" by Steiner, Sam Droege and others. Additional micro-desert habitats can be found from Laurel to Jug Bay along the Patuxent River. It is thought to be a remnant dune from the last ice age, created by prevailing winds depositing sand along a north-eastern bank. The sand comes from



UMD students begin cutting sweetgum saplings in oak-pine savanna.



Valuable young oak trees in foreground. *marine and alluvial deposits becoming exposed over time from the changing course of the river.*

The Bio Team's current management actions include prescribed fire every couple of years to setback resprouting Virginia pine, sweetgum and other early successional tree species, the use of mechanical and herbicidal treatment of mature sweetgum, tulip poplar and Virginia pine, and hand-cutting sweetgums in sensitive areas where oak regeneration is occurring.

For the next four to five hours, volunteers and staff steadily lopped off young sweet gum trees to ground level, carefully leaving young oaks free to grow. By the end of the day, hundreds of sweet gums had been cut back and carried to the road for chipping. In all,



UMD students survey the results of their service project on the refuge.

we protected about 5 acres of habitat peppered with highly valuable regenerating oak trees.

When the University of Maryland students finally left the refuge, they were dirty, tired and hungry, but satisfied in knowing they had helped restore habitat for the rare beetles and native bees that live on the refuge. 🦋

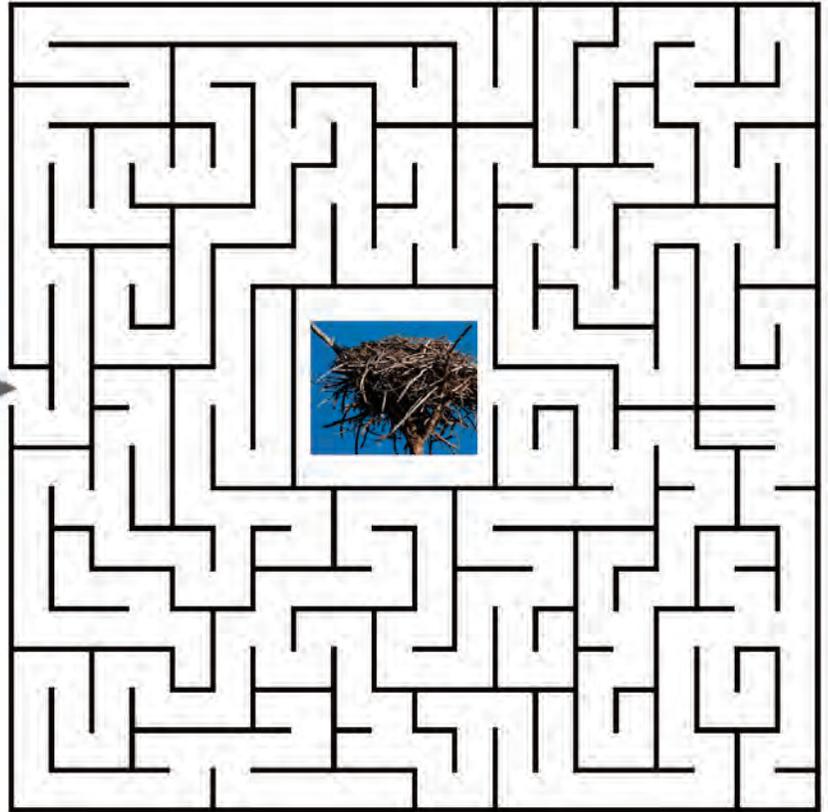
KID'S CORNER

EAGLE FUN FACTS

- An Eagle's nest can be up to 12 feet across.
- Eagles can live up to 30 years in the wild and 48 years in zoos.
- In 1782, the U.S. Congress selected the Bald Eagle as our national symbol because of the bird's long life, great strength, and majestic looks.



Can you help the Eagle find it's way home to it's nest?



WHAT'S YOUR FAVORITE BIRD?

H M L O E R N O W L K M P N
 E S O O G J R P K A Q N A V
 S I Y R B J F M E R O C F X
 P E D O V E A H P K I R P I
 A R E W H U R M K L G U L L
 R P N T E R G E E N I B O R
 R F D S A K I P N D L X P W
 O L K M V E A G L E T O U C
 W F C N O J A O M B C D O G
 P I A G D A H E R O N P M N
 I W T Q U A I L P C N M E A
 S K B I K X L Z O S R K D M
 H N I F W D J Q V X M O F W
 W E R M A L L A R D J K W R
 L Q D K H N S O E K L F X E
 P W R H U K P L O V E R J N

BIRD WORD SEARCH

- | | |
|---------|---------|
| MALLARD | EAGLET |
| OWL | PELICAN |
| GOOSE | SWAN |
| LARK | CROW |
| SPARROW | WREN |
| DOVE | QUAIL |
| GULL | BIRD |
| EGRET | PLOVER |
| ROBIN | HAWK |
| LOON | HERON |



Photo by Ross Feldner

Answers on page 15

Images of North Tract

Photos by Joe DiGiovanni



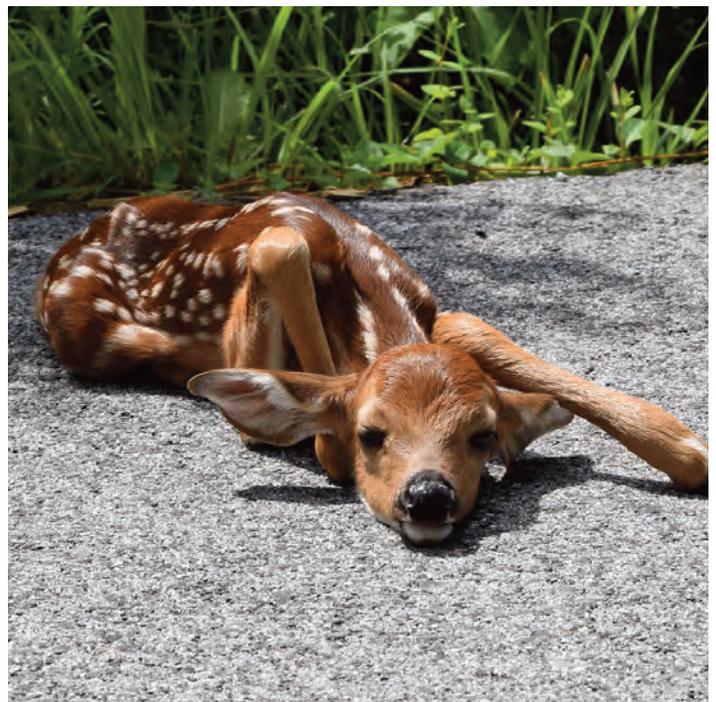
Coral honeysuckle flowers at Observation Tower



Wild Daisies

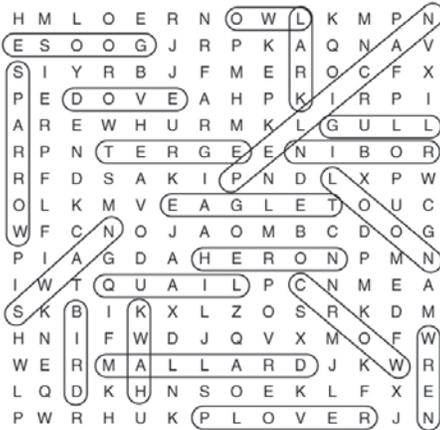
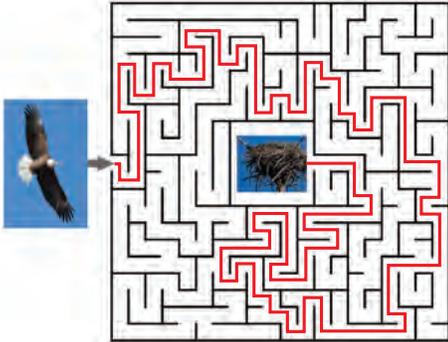


White bluebells along Little Patuxent River Trail



Less than an hour old fawn in the road

Answers to Kid's Corner puzzles



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Friends Board Meetings are usually held on the 4th Tuesday of each month at 7 PM at the Visitor Center. No Board meetings are held in August and December. The scheduled meetings remaining for this fiscal year are: June 23, July 28, September 22, October 27, November 24.

JOIN TODAY!

MEMBERSHIP APPLICATION

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

E-mail: _____

*(E-mail address will not be sold or shared.
 It will be used for Friends and Refuge announcements only.)*

Phone: (opt.) _____

- New Renewal Individual (\$15/yr) Family (\$20/yr) Contributor (\$50/yr)
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Make check to "Friends of Patuxent" and mail to address on reverse side of this page.

- Check here if you would like save a tree by reading our quarterly newsletter online.



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WE INVITE YOU TO JOIN!

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:

- Quarterly newsletter (mailed on request or go to www.friendsofpatuxent.org)
- 10% discount in our Wildlife Images bookstore and other area refuge bookstores
- Attendance at member functions
- Participation in on-site educational programs
- Sense of accomplishment in providing many opportunities for wildlife-related recreation, education and research

(Application on reverse side)