

FRIENDS OF PATUXENT

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www.friendsopatuxent.org

October-December 2016

100 Years of Bird Conservation

Brad Knudson, Refuge Manager

This year marks the centennial of the Convention between the United States and Great Britain (for Canada) for the Protection of Migratory Birds - also called the Migratory Bird Treaty - that was signed on Aug. 16, 1916. This international agreement forms a key component in our collaborative efforts to conserve birds that migrate across international borders.

The treaty connects the U.S. Fish & Wildlife Service (FSW) with our federal, state, private, non-government, tribal, and international partners. Collectively, these entities share a long history of conserving, protecting, and managing migratory bird populations and their habitats. David Houghton, President of the National Wildlife Refuge Association states, "Celebrating the centennial of the first treaty allows us to bring together those who have contributed to its success, and to galvanize efforts to protect migratory birds for generations to come."

Migratory birds are important to us in a variety of ways!

Their presence helps connect people with nature and add beauty, sound and color to our world. They provide countless opportunities for enjoyment by birders, hunters, and outdoor enthusiasts.



Many species, such as the bald eagle, have cultural and spiritual importance to a variety of Native Americans.

Migratory birds contribute environmental benefits, including pollination, insect and rodent control, and seed dispersal.

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Chair's Comments

By Jeanne Latham,
Chair of Friends of Patuxent

Making Connections and Making Friends



It's easy to make a new friend, once you find something to connect the two of you, especially wild animals. And friendships can grow to something more.

I met a young lady last week, who happened to be looking for volunteer opportunities at Patuxent. She is a Towson University graduate,

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100 Years of Bird Conservation

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Birds also are good indicators of environmental health because they are so visible and are relatively easy to study. Studying birds can give us a picture of what is going on in the natural world. The role birds of prey played in uncovering the negative impacts of pesticides such as DDT in the environment is well known, and just one example of “the canary in the coal mine” function they may serve.

Recent FWS estimates show approximately 46 million birding enthusiasts in the United States! This translates to birds being an important aspect of the nation’s economy. Birders contribute an estimated \$32 billion in retail sales annually. This includes money spent on field guides, binoculars, cameras, bird food, houses, transportation, birding guided tours, and other direct birding expenses. Birds, of course, are integral to the establishment of the National Wildlife Refuge System (NWRS), with the 1903 designation by President Teddy Roosevelt of Pelican Island as a bird sanctuary. The vast majority of the 565 refuges in the NWRS have some tie-in to bird con-



A flock of Tundra Swans takes flight

servation. Some may be a very specific purpose, such as providing nesting habitat for redhead ducks at Horicon NWR in Wisconsin. Many others are more general - “to serve as an inviolate sanctuary for migratory birds.”

There are nearly three million acres of Waterfowl Production Areas throughout the upper Midwest - the “Prairie Pothole Region” - whose primary purpose is to provide habitat for waterfowl. These

scattered parcels of wetland/upland complexes also support many species of shorebirds, grassland nesting birds, and other species.

So the next time you are enjoying the sight of a scarlet tanager, or the song of a winter wren or seeing a flock of tundra swans flying south for the winter, thank the conservation pioneers that had the foresight to promote and pass the Migratory Bird Treaty Act of 1916. 🐦

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.

Article submission deadlines:

Issue No.	Months	Deadline	Issue 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 19.

We invite you to join!

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



Little Known Facts About Patuxent Gabrielson Lab Blue Prints

Matthew C. Perry

Most folks at Patuxent know that Gabrielson Laboratory was dedicated in 1969, and that the building was named for Dr. Ira Noel Gabrielson, who was the first Director of the Fish and Wildlife Service. The dedication took place on a beautiful Saturday afternoon on October 11th and Dr. Gabrielson was one of the speakers. A little known fact is that in early 1968 there was only one set of blue prints and the engineers were scrambling to obtain extra copies so the various contractors could conduct their work. For unknown reasons, it apparently was impossible for the government to create more copies. The engineers appealed to the drafting teacher, Mr. Gene Daniels, at Laurel High School to assist in their predicament, by making extra copies. The teacher agreed and selected a unique group of students, who had the expertise to make professionally accurate copies of all the blue prints. During the spring semester of 1968, the selected students worked one hour of class per day until the project was completed. The high school students were paid minimum wage, which was \$1.00 per hour. The copies looked just like the originals and each sub-contractor now could have their own set of blue prints. One of the students selected for this unusual project, and who remembers it well, is none other than Stuart Robbins, the oldest son of Patuxent's senior biologist Dr. Chandler Robbins. 🐦



Dr. Ira Noel Gabrielson (left), former director of the Fish and Wildlife Service, with Dr. Russell Train, Undersecretary of the Department of Interior.



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<https://twitter.com/USFWSNortheast/status/78546358377783296>



Federal Duck Stamps - Help Acquire & Protect Wetlands for Refuge System

(Taken from <https://www.fws.gov/birds/get-involved/duck-stamp/e-stamp.php>)

Put Your Stamp on Conservation - Buy A Duck Stamp

One of the easiest ways that anyone can support conservation is by buying Federal Duck Stamps, which are among the most successful conservation tools ever created to protect habitat for birds and other wildlife.

Federal Duck Stamps are conservation revenue stamps; 98 percent of the purchase price goes directly to help acquire and protect wetland habitat and purchase conservation easements for the National Wildlife Refuge System. Wetlands acquired with Duck Stamp dollars help purify water, aid in flood control, reduce soil erosion and sedimentation, and enhance outdoor recreation opportunities.

One Stamp, Many Uses

While waterfowl hunters 16 years of age or older are required to purchase them, anyone can contribute to conservation by buying Duck Stamps. In addition to serving as hunting license and conservation tool, a current Federal Duck Stamp is also a free pass into any national wildlife refuge that charges an entry fee. Because nearly all of the proceeds are used to conserve habitat for birds and other wildlife, birders, nature photographers and other outdoor enthusiasts buy Duck Stamps to help ensure that they can always see wildlife at their favorite outdoors spots.

Federal Duck Stamps are sold at many sporting goods stores and other retail locations - both large and small - that sell sporting and recreation equipment.



2016-2017 Federal Duck Stamp featuring trumpeter swans, art by Joseph Hautman of Plymouth, Minn. Credit: USFWS

High-resolution versions of this image are available for certain uses.

Contact rachel.levin@fws.gov.

You can also buy them at many national wildlife refuges, and online through Amplex. As an added convenience, especially for hunters, the E-Stamp program allows you to buy a Duck Stamp online and instantly obtain a printable receipt good for 45 days, within which time a physical Duck Stamp is mailed to you.

A Unique and Collectible Work of Art

Also known as the Migratory Bird Hunting and Conservation Stamp, the Duck

Stamp was conceived in 1934, when Congress passed and President Franklin D. Roosevelt signed the Migratory Bird Hunting Stamp Act (later amended to the Migratory Bird Hunting and Conservation Act). The first Duck Stamp was designed by J.N. "Ding" Darling, then director of the Bureau of Biological Survey (forerunner to today's U.S. Fish & Wildlife Service).

In addition to being the only conservation revenue stamp, the Federal Duck Stamp is also unique in the way the stamp is created. Each year, the U.S. Fish & Wildlife Service holds an

art contest, the only juried art competition sponsored by the federal government. Any artist 18 years or older may enter, and the winning artist sees his or her work featured as the design on the following year's Federal Duck Stamp.

The Federal Duck Stamp Art Contest is open to the public; anyone can witness a bit of history in the making as judges select the winning art from among hundreds of entries.

If you can't make it to the contest, you can still see original Duck Stamp entries; the top entries each year tour the nation, exhibited at museums, refuges, festivals and other venues.

Federal Duck Stamps are miniature works of art, and they are prized by stamp collectors around the world. The stamp image is featured on products such as t-shirts, calendars, mugs and blankets, through the Duck Stamp Licensing Program.

Many states issue their own duck stamps. In some states, the stamps are purely a collector's item, but in others, the stamps have a similar role in hunting and conservation as Federal Duck Stamps. Some states hold contests to choose the art for their stamps.

Junior Duck Stamp: Conservation Through the Arts

The Junior Duck Stamp Program is the U.S. Fish & Wildlife Service's premier conservation education initiative. The program teaches students across the nation conservation through the arts. Revenue generated by the sales of Junior Duck Stamps funds environmental education programs in all 50 states, the District of Columbia and several territories.

Become A "Friend of the Duck Stamp"

Did you know the Federal Duck Stamp Program has a Friends group? The Friends of the Migratory Bird/Duck Stamp is dedicated to promoting

awareness and sales of the Federal Duck Stamp, and encouraging an appreciation of how stamp revenues sup-

port conservation of birds and other wildlife in the National Wildlife Refuge System. 🦆



From the Archives



An aerial photo of Cash Lake - date unknown, but probably somewhere around the mid 1950's. Of note is the fully forested peninsula, which has been a meadow since at least the 1980s. Former USGS research scientist Dr. Matt Perry speculates that the trees may have been removed to provide a grassland for native Canada geese to graze, when populations were much lower than present day.

The 2016 Waterbird Nesting Season

Frank McGilvrey, Volunteer-biologist

We have monitored the reproductive success of resident waterbird species for 20 years. Methods include spring pair counts, summer broods/nestlings, and, for wood ducks, nest box checks. Species monitored include Canada goose, wood duck, mallard, black duck, hooded merganser, pied-billed grebe, great blue heron, bald eagle and osprey.

Weather is an important component in reproductive success. The winter of 2015-16 was mild, after two hard winters. December was the warmest on record. Early spring was also mild, with March the warmest on record. It was marred by a three-week spell at the end of April marked by cloudy, wet weather that decimated early duck broods.

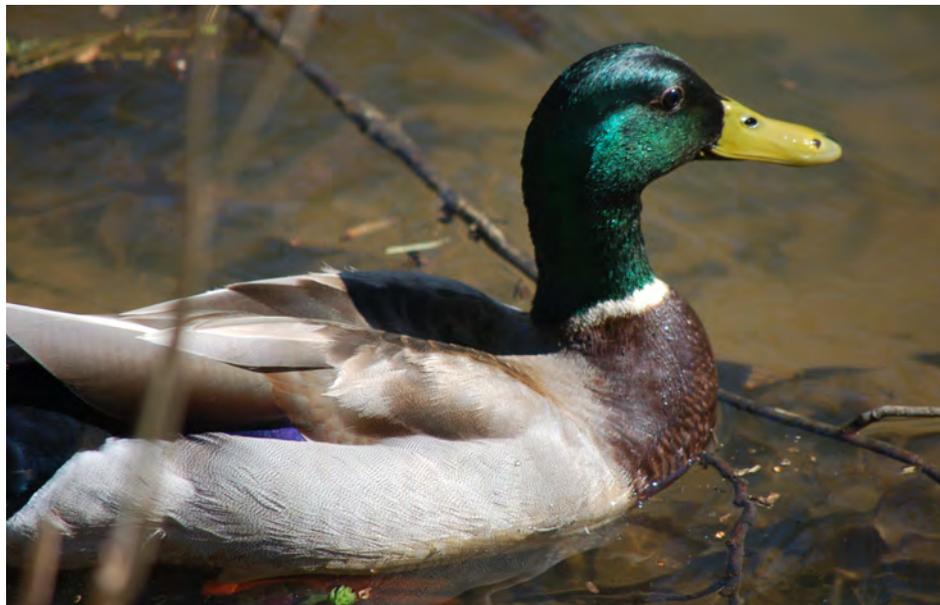


Photo by Ross Feldner



Photo by Ross Feldner

A summary of high points for each species follows.

Canada goose - This is historically a non-native resident. A small flock was introduced in 1950 and increased very slowly until the mid-1960s when the population began to increase rapidly. Pair counts peaked at 270 pairs in the late 1990s. Since then, the nesting population began to decline to a record low of 99 pairs this year. We only had 10 pairs on South Tract. Two pairs figured out how to outwit predatory rac-

coons and foxes. One pair nested on an osprey platform and the other on the hacking tower. No, the parents do not feed them in the nest. As soon as they are dry, they jump! Rearing success rebounded from a record low of 40 on the wing in 2008 to 150 this year.

Wood duck - This species has depended on nest boxes since the mid-1950s to supplement the small number of cavities. We presently have about 55 boxes on the refuge. We catch the hens in the box for banding. This gives

us an idea of the age structure. The breeding population reached a low of 57 pairs this year. The peak in the last 20 years was 82 pairs in 2005. In addition to the 33 broods hatched from boxes, we had 15 cavity-hatched broods; all but one on Central Tract. This was a record. Approximately 145 young reached flight.

Mallard - This is also a non-native resident. Breeding populations are derived from state and private game farm introductions since about the 1940s. The breeding population peaked at 63 pairs in 1999. It dropped to 13 in 2012 and rebounded slightly to 23 this year. We recorded seven broods, the most since 2006.

Black duck - This species has almost disappeared as a breeder. We record one or two pairs a year. The last brood was seen in 2008.

Hooded Merganser - This is a relatively recent addition to the breeding population. We found the first nest in a box in the late 60s. This population has remained small. The peak was six nests

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Fall 2016 Exhibits in the Hollingsworth Gallery

By Faith Leahy-Thielke, Patuxent Volunteer

Fall promises original and interesting exhibits in our Hollingsworth Gallery: Charles Lawrance in October; Julie Maynard in November and Karen Klinedinst in December.

“Finart” of Fells Point has morphed into “Finnapolis” of West Street. Fish are the “signature icons” of Charles Lawrance’s work. After paddling a kayak along Annapolis’s shorelines, Lawrance employs the “ancient Japanese technique of recording one’s fish catch, ‘gyotaku.’” He inks the scales of his catch of the day and presses the fish onto mulberry paper then hand pulls a print onto wood and glazes the image. Snorkeling provides inspiration from otherworldly underwater landscapes that contribute to Lawrance’s surrealistic images which contain his commentaries on environmental hazards of our culture. Imaginative, humorous and provocative are some of the adjectives used to describe his “dreamscapes” that serve as “metaphors” for “navigating” contemporary society.

That Lawrance’s mother was in New York City’s Metropolitan Museum of Art when her water broke was undoubtedly significant, but his website bio describes growing up in the outdoors - so that probably didn’t happen at Brooklyn’s Botanical Gardens. He obtained his Bachelor of Fine Art at MICA (Maryland Institute College of Art in Baltimore), and has an impressive list of accomplishments since then: set painting, album art and magazine illustration and cover art, murals (11 outdoors in Baltimore) and interiors of restaurants, homes and offices. His media are oil and acrylic. Can’t wait to see what he has planned for Patuxent.

November’s artist, Julie Maynard, wears many hats. Although she has an advanced degree in plant physi-

ology, her day job is editor and publisher of two small weekly newspapers - including the Brunswick Citizen. She is originally from the Midwest, but spent some of her childhood in Cambridge, and is presently nestled into Frederick County. Her mother was a birder and Maynard not only follows in her footsteps, but records breeding pairs of various species in a circumscribed tract. Many of her works of art are lovely and imaginative collages of birds which she creates on wood and paper. From a distance they appear realistic; up-close the viewer sees a “mosaic of text and texture.” Maynard writes that she usually starts with a

***Imaginative, humorous
and provocative are some
of the adjectives used to
describe his “dreamscapes”***

photograph of a bird. To create the layers, she uses “bits and pieces torn from magazines and catalogs” in addition to bits and pieces picked up along the Potomac River and city streets. Varnish completes the collage and most are under glass. Maynard writes that some of her pieces were inspired by myths - tales that attempted to explain natural phenomena. Animals in these tales evinced “curious interest” toward humans and, like today, watch us - and we them - as we try to figure our places in the natural and “mostly manmade world.”

Maynard lives in Burkittsville and is a member of the Artist’s Gallery in Fred-

erick. She has exhibited at the Greenbelt Arts Center and Annemarie Sculpture and Arts Center in Lusby. We’ll look at her work both from a distance - and close up.

If her Hollingsworth exhibit is like the elegant images on her website, it will be wonderful to see Karen Klinedinst’s “iphonography” in December. Klinedinst describes her camera work as “landscapes influenced by 19th century Romanticism” - captured and recreated “with 21st century technology.” She uses both an iPhone and an iPad which enable her to record images “unencumbered by a heavy camera.” Additionally, she writes, these tools make it possible to manipulate the images and express her emotional response to the landscape - rather than present only a realistic image.

Klinedinst was born in central Pennsylvania and recalls that much of her childhood was spent drawing, painting and photographing surrounding landscapes. She moved to Baltimore to attend the Maryland Institute College of Art. Since earning her BFA, she has lived and exhibited there, although she has travelled extensively and branched out regionally. She has received a great deal of recognition and numerous awards - including “Artist in Residence” - twice - once in Acadia (Maine) and once in the Catskills, any number of “Juror’s Choice” or “Best in Show” for her lovely work. Not only has Klinedinst exhibited widely, she has taught workshops in technique in several locations including Chestertown River Arts Gallery, Ridgely (Adkins Arboretum) and at her Baltimore studio.

The holiday month will offer a fascinating exhibit to look forward to. What great prospects for this fall. 

Osprey Overture

Debbie Phillips

On Friday, June 3rd a group from the Friends of Patuxent boarded a pontoon boat with Greg Kearns as our guide to meet and interact with a group of newborn osprey on the lower Patuxent River. We viewed a nineteen year old female osprey which was unusual as the average life span is eight to ten years. They can nest for three to five years. Our boat slowly approached the elevated nest on a pole with a six inch predator guard. Greg carefully pulled out a four week old, eleven and a half pound fledgling for Stephanie Everett to hold. Other members also had the opportunity to hold these adorable babies. Their weight doubles every few days. Two out of three fledglings survive and the species can have up to fifty percent mortality. We examined the inner wing tips. The tail feathers are the last to grow. In one to two weeks the osprey is completely feathered. The incubation is alternated between the male and female. The dominant osprey gets fed by walking on its heels. The mother provides shade and cover. The osprey feet have opposable grip because of the flexible wrist for picking up fish. The wing upstroke is stronger because the wing is not fully feathered underneath. The feathers are originally covered with sheets of Keratin, a tough protein substance we have in our hair and nails. These sheets flake off.



Osprey in elevated nest



Great blue heron at Patuxent River Park

Two years ago three sets of three each were killed. The next season the new offspring survived. The mothers circle over the nest to keep a protective eye on their progeny. The birds do not have a good sense of smell. We observed a double crested cormorant on a log, "Harry" the heron, and a red billed river bird.

The river bank revealed a denuded surface caused in part by a kingfisher digging for habitat along with bank swallows. The surface is attacked by the beak then cut and shoveled by the feet. A sea level rise also erodes and collapses the river bank.

Phragmites protect the oak trees on the bank, stalks growing thick in the tree cellulose.

Forty-five resident geese were removed from this ecosystem and the area was fenced to protect it. Rice plants grow in the water to serve as food for the birds. It will be six to eight feet by summer's end. Aerial helicopter spraying protect the plants. However, the spray must be free of surfactant which is poisonous to birds and can cause lymphomas. We saw an inactive beaver lodge. Forty five hundred geese have been killed over the year. The area has also been visited by Canada geese and eagles. The osprey run off the eagles.

In colonial times two hundred fifty sailing vessels sailed from Charlestown to load tobacco for transportation. Ero-



Turtle resting on log grabbing some sun on a partly cloudy day



Biologist Greg Kearns holding osprey



"Friendly Bird Statue overlooking Patuxent River"

sion and sedimentation eventually filled the Patuxent creating the best marsh area. On the bank sits the Thomas Billingsly House (1740) which is now rented for weddings. A noose carpet or "hairy umbrella" is a noose snare to catch hawks and eagles has successfully trapped five adults. Two to three thousand geese can feed in one acre of grass as they migrate. Carp have been brought in by Europeans which were not initially delicious to us. However, they have been seen in nest boxes. During the War of 1812 the area was visited by Commander Joshua Barney. The Battle of the Patuxent was fought thirty miles downriver. He went on to the battle of Bladensburg.

Two hundred seventy osprey nest down to Solomon's. The area has not reached a saturation of species. On Gardeners Island, New York there are no predators as a limiting factor, allowing the osprey to nest in cell phone towers. The osprey are the best environmental indicators, creating wildlife diversity. They keep non native fish such as the snake head, carp and goldfish in check.

This cruise was an educational way to start our summer. I hope this fosters a further understanding and appreciation of the cycle of nature and the part biologists play in encouraging diversity. 🐦



One day old Osprey chick in nest at Patuxent River Park

Calling for Your Articles and Photos Please

We're looking for articles—your articles—and cool photos for future Friends newsletters. You don't have to be a professional writer. Just jot down a paragraph or two about a nature topic dear to your heart. Or send us a photo or two of a beautiful plant, wildlife, or people at a Refuge or Friends event. And if you will, please include a caption for your photos.

Please consider sending us your article and/or your photos for your next newsletter. Make sure to title your article and include your name and volunteer position. When you send it, put Newsletter Article in the Subject Line of your email. We'd like to hear from YOU. Here's where to send them: ross.feldner@verizon.net **Thank you so much!**

Little Known Facts About Patuxent Airplane Landing at Patuxent

by Matthew C. Perry

Although Patuxent has never had an airplane landing strip, in 1938 a plane landed in what is now the Endangered Species Research area of the Central Tract. The pilot was Mr. John Ball, a Works Progress Administration supervisor, and he was accompanied by his wife. He landed his private plane on a grassy area to inspect progress of work being conducted in the area by government workers.



Mr. and Mrs. John Ball arriving by plane at Patuxent and greeted by sons of Dr. Morley

Mr. Holliday Obrecht, who was the Patuxent refuge biologist for many years, told me that the aircraft was a "Rearwin Sportster." It was built by Rearwin Aircraft and Engines of Kansas City, KS. It was a two-seat cabin monoplane built between 1935 and 1938. There were only about 330 built, so the aircraft would be quite valuable today. Back in the 1930's, most aircraft were tail draggers (2 main wheels in the front, with a steerable tailwheel). They were designed to utilize grass airfields as those were the most common of that era. The plane had relatively large main wheel tires, which was great for handling on unimproved air strips.

A photo taken by Dr. Leland Morley, the Superintendent of Patuxent Research Refuge, shows Mr. and Mrs. Ball shortly after landing and being greeted by Dr. Morley's two sons. One of Dr. Morley's sons became a veterinarian like his father and was well-known in the Laurel area for many years. The photo shows the historic Dr. Charles Duvall home in the background, which shortly after was destroyed and replaced with the much smaller home used by endangered species caretakers, including Robert Doyle at present. 🐦

Chair's Comments

Continued from page 1

majored in biology, and has a passion for snow leopards. In fact, one of her dreams is to help the plight of the snow leopard and possibly travel to Central Asia to do just that. Wow - imagine that - my most favorite animal and big cat is the snow leopard! We connected! She also mentioned her fascination with other critters like the mantids - different colors, shapes, sizes and interesting behavior, i.e., the female devouring the male after mating. Along with a professor and college students before she graduated, this young lady worked and enjoyed an amazing trip to the Amazon.

I'm hoping that my meeting with this young woman may inspire her to become a volunteer and a Friends member. Whether or not that happens, she made an impression on me and I think I made an impression on her - we are friends. She plans to borrow two books that I have on the snow leopard, and I plan to keep in contact with her.

All of us can reach out to others, find some critter or habitat or plant or cause to connect us. Connecting with people through nature will benefit our Refuge, our organization, and the world at large. Small steps of finding friends will lead to bigger steps down the road. 🐦

The 2016 Waterbird Nesting Season

Continued from page 6

in boxes in 2006. We have had only one nest in a box the last two years. The one brood produced four on the wing this year. This is a cavity nesting species, but only one cavity produced brood has been seen in the 20 years.

Pied-billed grebe - Between 1997 and 2015, four broods were recorded on the refuge. This year, we had four broods; one on South Tract, two on Central and one on North. Three of the broods were only seen once. One brood of four was known to reach flight. The brood on Wood Duck Pond was certainly lost. The pond dried up and grebes legs are set so far back, they cannot walk on land.

Osprey - At the turn of the century, an experiment with hacking ospreys was attempted. This resulted in one nesting pair in 2006. Since then we have had one nesting pair on Cash Lake. Although rearing one or two young successfully each year, we have never had a second attempt.

Bald Eagle - Three years ago, we had the first known nest on Patuxent since the turn of the century. Two young were successfully fledged this year.



Photo by Ross Feldner

Great blue heron - We had a nesting colony on North Tract until three years ago. When an early spring drought dried up the pond over which they nested, the colony was deserted. They never returned. 🐦

6th Annual Friends of Patuxent Wildlife Holiday Bazaar

Saturday, November 5, 2016

9AM to 3PM

National Wildlife Visitor Center
Patuxent Research Refuge, Laurel, MD

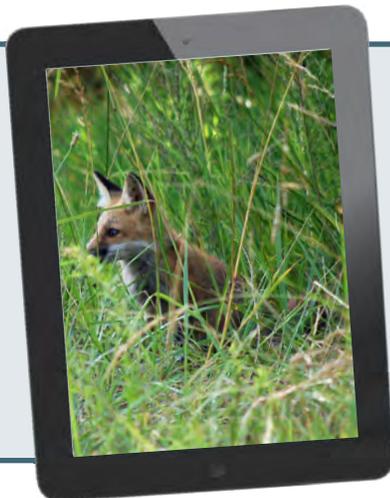


- Shop Baldy's Bargains for wild and not-so-wild new & gently used treasures.
- Visit Candy Cane Lane (Kid-friendly) shop
- Take home a treat from the Bake Sale
- Lunch at the Crane Café
- **MEET LIVE ANIMALS**
- **DOOR PRIZES every hour**
- **TRAM RIDES** (*weather permitting*)
- Make unique greeting cards & gift tags
- **NEW THIS YEAR - Garden Corner**
- Play Wildlife Bingo
- Enjoy wildlife holiday story time



Find unique gifts from **more than 30 local crafters** ...and at the same time support the Patuxent Wildlife Research Center and the Patuxent Research Refuge.

Cash, checks, and credit cards.



Save the Date

Saturday December 10, 2016

Karen Klinedinst, Artist of the Month will be doing a demo of how to use your iphones and ipads for wildlife photography

Picture-Perfect Picture Books at Wildlife Images

By Pat Simons

The selection of creative, educational, and beautifully illustrated children's books continues to expand at the Friends' bookstore. With the holidays approaching, we hope you will make Wildlife Images your first stop for holiday gift shopping, especially when you are looking for the perfect book for a child, teacher, or anyone who loves well-written and wonderfully illustrated books. Think anything from a counting book of bird sounds to a story about the rescue and rehabilitation of a red fox, to a good night story of a polar bear cub being lulled to sleep beneath a silvery starry sky. For tales spanning forests, fields, marshlands, and more, you'll find it at Wildlife Images.

A few of our favorites

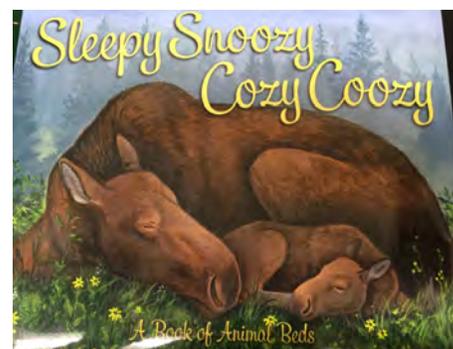
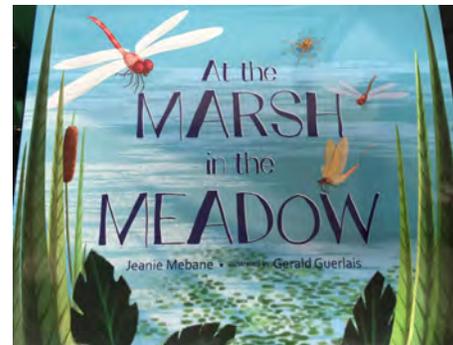
Adopted by an Owl, by Robbyn Smith Frankenhuyzen, and illustrated by Gijsbert van Frankenhuyzen, tells the true story of Jackson the Owl who was adopted by a family, and in turn adopts and watches over them. Also by the Frankenhuyzens, **Saving Samantha** is the story of the recovery and eventual release of a red fox. Found abandoned in a rusty trap, the family rescues the fox who they name Samantha. They heal her wounds, restore her health, and re-acclimate her to the wild until Samantha is able to survive on her own and care for her own kits.

Butterfly Park by Elly Mackay is the story of a girl who moves to the city and learns how, with flowers and friends, she can bring butterflies to the barren Butterfly Park. An extra bonus—the inside of the book jacket is a poster with pictures of butterfly-attracting flowers. Delicate paper-cut illustrations are the perfect accompaniment to this simple tale of how anyone can make a difference and create a place of natural beauty.



DayLight/Moonlight by Matt Patterson explores various habitats such as ponds, deserts, swamps, cities, prairies, forests, and even a backyard, showing what you'll find in such environments in the daytime and at night. The book includes 22 different habitats, each shown in daytime and nighttime hours with colorful, detailed pictures.

Mama, Why? In this delightful lullaby, a polar cub asks questions of his mama as he looks out at the moon and stars. Written by Karma Wilson, and lushly illustrated by Simon Mendez in frosty shades of blue, white, and silver, this book gently takes one from the

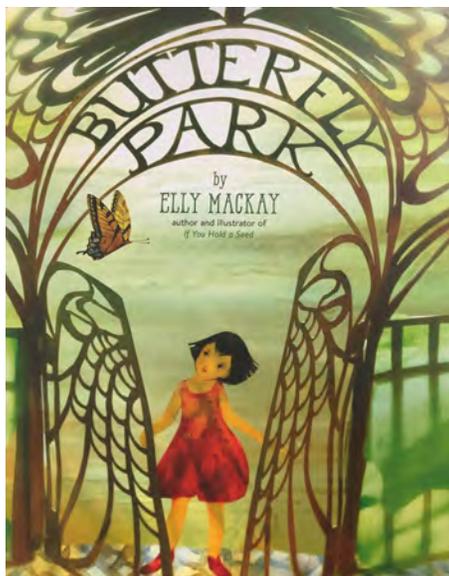


moon and stars, fairy tale pirates, princes, and queens, leaping dolphins, and falling snow to the cub's stardust bed where he can dream of moonbeams and his mama.

Sleepy Snoozy, Cozy Coozy, A Book of Animal Beds. In a singsongy, tongue-twisting combination of poetry and prose, author Judy Young and illustrator Michael Glenn Monroe explore the bedtime habits of common North American animals. The book visits the sleeping places of eagles, moles, spiders, crayfish, beavers, bats, alligators, hermit crabs, moose, kit fox, dolphins, and finally a young

Join the Wildlife Images Bookstore Volunteers

Do you like to meet people? Are you interested in retail? Do you have a few hours to spare? The Wildlife Images Bookstore is looking for volunteers to help in the store. Hours and days are flexible. For more information, contact the store manager, Linda at 301-497-5771 or wibookstore@friendsof-patuxent.org



child asleep with the stars and a sliver of yellow moon hovering overhead.

At the Marsh in the Meadow by Jeanie Mebane, illustrated by Gerald Guerlais. In a cumulative poem with playful text and colorful art, this book explores the plants and animal life of a freshwater marsh. “These are the reeds that grow in the mucky mud, on the bottom of the marsh, in the middle of the meadow...” and so on exploring the relationship between the plants, fish, birds, amphibians, and insects that co-exist in a freshwater marsh.

Birdsongs, by Betsy Franco. Richly illustrated (by Steve Jenkins) with layered paper collage pictures, this book counts backwards from 10, from a woodpecker to the one tiny tzik of a hummingbird. In between 1 and 10, we hear from mourning doves, sparrows, gulls, chickadees, mallards, crows, thrashers, and finally a mock-ingbird who copies the songs of everything she’s heard all day.

Perfect Stocking Stuffers

Don’t forget the small gifts for friends, colleagues, and teachers. We have numerous, quality items in the “under \$10.00 range” perfect for last minute gifts or to just keep on hand for when the occasion arises. Our “Advice From” magnets and bookmarks have become favorites with visitors. Who can resist



the advice from the hawk to “Soar to new heights,” from a river suggesting we “Go with the flow,” or a chipmunk telling us “It’s OK to be a little cheeky.” Other favorites include wildlife playing cards, hand painted gourds, laser-cut wood ornaments, note pads, coffee mugs, and our selection of over 20 waterproof folding guides.

Just Arrived

Dancing with Tex. The Remarkable Friendship to Save the Whooping Cranes by Lynn Sanders and illustrated by Sergio Drumond is based on the true story of George Archibald, a young researcher, and Tex, the whooping crane, who became dance partners. At first Tex lived in Maryland before being moved to Baraboo, Wisconsin to what would become the International Crane Foundation. After many years of failing to produce a fertile egg, and many years of George and Tex dancing together, Tex lays a fertile egg and Gee Whiz was born. Thanks to George and Tex’s friendship and belief in each other-whooping cranes still live on the earth. 🦩

Friends of Patuxent Wildlife Holiday Bazaar



The Holiday Bazaar Committee is looking for volunteers who are willing to be lead in one of the following areas: Volunteers, Kid Friendly Shop, Bake Sale/lunch, Thrift Shop, Crafts, or Cashier. Please contact Brenda Stone at stonesoop@comcast.net if you are interested.

DONATE: Donations for Baldy’s Bargains Thrift Shop may be left at the Visitor Center until October 26. Clean out that closet and

donate what you can’t use to Friends of Patuxent. Don’t forget to fill out a donation form. Please - NO posters, flat art, or bed linens. Books, CDs, and DVDs are always popular.

VENDORS: We’re still looking for vendors. Vendors pay \$10 to reserve a space and 15% of sales. We provide a table. If you would like to be a vendor or know someone who would, contact Mary Ann Hartnett at 2ufrommah@gmail.com or leave a message at 301-497-5789.

BAKE: Don’t forget the Bake Sale. Donations for the Bake Sale may be left at the Visitor Center starting Friday, November 4. Cookies, bars, snack mix, quick breads, and coffee cakes are most popular - doesn’t have to be fancy, just homemade and delicious.

VOLUNTEER: Come and join us as a volunteer on Friday, November 4 as we get set up for the Bazaar and on Saturday, November 5. We have a lot of fun and there are plenty of chances to shop. To volunteer contact Susan Minter at sandjminter@yahoo.com. Refuge volunteers and Friends of Patuxent members welcome.

What Is That Mess?

Ann Coren, Photos by Ann Coren

If you've walked through the Schoolyard Habitat (SYH) this summer you will have noticed the large swath of land covered in compost and cardboard. These are the promising signs of compacted clay being reconditioned into healthy soil. Yes, it's an ugly looking process for one season.

Last winter the new roof and solar panels were installed onto the National Wildlife Visitor Center. The SYH lies between the parking lot and the building, so machinery driven across the SYH left behind a swath of naked land, 1700+ square feet, giving us a fabulous opportunity to re-landscape and to create a new educational space. We had many decisions to make; how best to rehabilitate the compacted clay soil, what plants to choose, and most importantly what kind of Conservation Landscape design we want to display for the public and how it will serve our educational goals.

Fortunately we have 4 Master Gardeners, Ann Coren, Anne Cottle, Sue Priftis and Cathy Kuehne, now working in the Schoolyard Habitat and we put our collective experience to work. Sometimes the best long-term gardening results take patience! We could kill the weeds relatively quickly with chemicals. But our larger goal was to build healthy soil. Healthy soil has structure, 50% nooks and crannies for air and water. The key to healthy soil is the spaces! Healthy soil is crumbly, called tilth, with stable aggregates, large, medium, and small pores. Healthy soil is resilient to climate change effects because it drains well during rain events and the organic matter holds water during drought. It takes time to build this soil and is dependent on the presence of: 1. microbes: one teaspoon of healthy soil contains over one billion beneficial microbes; 2. mycorrhizae, the symbiotic connections between friendly fungi and plant roots which make it possible for



SYH - Ranger Diana Ogilvie, Volunteers Frances Kent, and Sue Priftis analyze the soil in the new section.



Discovering wildlife in the wheelbarrow mulch - Ranger Dennis Hartnett, Volunteers Anne Cottle, Ron Clements, Sue Priftis, Rosa Kirk-Davidoff.

the plants to absorb water and nutrients, while at the same time giving the fungi carbohydrates. The mycorrhizae also help the plant fight disease, combat stress, expand the plant's root system, and aid in drought tolerance; 3. beneficial bacterium which help the plants fix nitrogen; and 4. nematodes and other soil organisms. The soil becomes stable because of the living roots and associated mycelium of a

fungi, the white stuff you find in good soil; the glomalin, which is a complex of exuded fungal proteins and which is increasingly noted in studies of carbon storage and soil quality; plus other proteins and polysaccharides exuded by the many soil organisms. It is the carbon stored in healthy soil that makes the rich black color. Did you know that gardeners are fighting climate change by sequestering carbon in the soil?



Two toads under the curb

The apparent mess visible in the SYH this summer is called ‘lasagna layering’. The goal of lasagna layering is to kill weeds and to add microbes, which will help the plants turn the clay into soil. The technique of lasagna layering involves first mowing all weeds back to the ground. A layer of cardboard is laid down to prevent weed regrowth. Then alternating layers of leaves, compost, and cardboard are laid on top to create a thick protective layer that will eventually host the microbes and fungi. Ideally this should be done in the autumn so that the cardboard decomposes over the winter, smothering the weeds underneath. We did not have this luxury so we experimented with summer layering.

The next step was to slice the compost into the compacted clay. This no-till method preserves whatever microbial population survived the compaction and creates the spaces for air, water, fungi, and microbes. Current research on tilling shows severe damage to microbial populations, so we chose not to till. Many thanks to the Interns and volunteers who spent their ‘sweat equity’ deeply slicing the hard clay. Your work was the key foundation to successfully restoring a healthy ecosystem.



Baby black snake in the mulch wagon

We selected plants native to the Maryland Coastal Plain ecosystem that like clay soils. Most of the plants are already found on the Refuge, but some will be re-introductions of missing plants found elsewhere in the Coastal Plain. All plants are beneficial to pollinators and birds, some as host plants for caterpillars, some as nectar plants, and some as food for birds. All of the plants that host caterpillars are beneficial to birds since 90% of native song birds feed only soft larvae to their young.

The landscape plan will be an attractive demonstration to homeowners of how beneficial their yards can be if landscaped with native plants. We have laid out internal pathways so that children and photographers can get up-close and personal to the returning diversity of wildlife.

We are excited to have received the Maryland 2016 Day to Serve mini-grant from the Maryland Governor’s Commission on Service and Volunteerism, to entice and welcome new volunteers to the Refuge and to native plant gardening. The Grant funded the plants and deer repellent for our ‘Planting for Pollinators’ event on September 10 and 11.



Snake eggs in the mulch wagon

Volunteers also learned how to create native plant gardens.

We are frequently reminded that we are indeed working at a Wildlife Refuge and in many ways successfully supporting wildlife. Hauling mulch for the pathways we were greeted by a baby snake, accidentally shoveled snake eggs into the mulch wagon (that we carefully put back in place) and saw toads sheltering in a sidewalk niche. 🐍



Fall Migration Monitoring Banding Station at PWRC

Matt Rogosky

The Patuxent Wildlife Research Center is blessed with a unique transmission right-of-way. In 1959 scientists at the Center conceded to allow a powerline to traverse the PWRC property on the condition that the habitat under the wires be managed with a previously untried method. Rather than annual or biannual mowing, this right-of-way is managed through basal spraying of tree species that have the potential to attain a height that might drain power from the wires. The result is largely a dense shrub canopy approximately two to three meters in height. In late 1979, Danny Bystrak recognized the potential of this habitat for use by migrating landbirds, and obtained permission to experiment with placement of some mist nets along a 0.5 kilometer section of the corridor. The results were very impressive and in 1980 he established the fall migration monitoring station.

Today we operate 26 mist nets for 3 days a week from mid-August to mid-November. The nets are opened before dawn and operated for approximately 3.5 hours, and every 40 minutes they are checked and birds removed for banding. Birds are transported in cloth or mesh bags to a centralized location, where each is identified, measured and weighed. Typical processing time is under one minute per bird. This effort has shown that the habitat was used to a remarkable extent by birds on migratory stopover, as well as by locally nesting birds, and birds arriving to over-winter. Perhaps a combination of abundant fruit production, a high density of leaf surfaces for insect gleaning, and cover from predators explains this use. 🐦



Photo: Sandy Teliak



Photo: Sandy Teliak

Adult Male Connecticut Warbler

Little Known Facts About Patuxent Dynamite Shed

by Matthew C. Perry

During the early development years (1936-56) of Patuxent Research Refuge there were not the large bulldozers and other heavy equipment that are now considered routine for landclearing operations. Refuge personnel were required to use primitive means of disposing of large tree stumps, while they were preparing old woodlots for new grazing areas for geese and other wildlife. One product commonly used was the relatively cheap dynamite. Dynamite was also used to make drainage ditches for some of the lakes and ponds created at Patuxent.

Sticks of dynamite could be detonated at a distance making them relatively safe for workers. However, storage of this explosive material had to be done at a good distance from the staff working area. A shed was constructed in the woods about 1000 feet from the nearest occupied building for the sole purpose of storing dynamite.

Over the years when dynamite ceased being used the dynamite shed fell into disrepair. The wooden roof and door collapsed and all that remained was the square 15x15 foot square box made of concrete blocks. In 1987, when the government conducted an extensive written and photographic survey of all buildings at Patuxent this shed was not included, although other much smaller sheds were included.



*Charles Lammers dynamiting the drainage ditch for Cash Lake, 1939.
Inset: Dynamite Shed in the woods during winter 1989.*

Apparently, the meticulous government survey people never found the shed hidden in the woods, where the “skeleton” from the past still exists.

One of the workers in charge of the dynamite at Patuxent in the formative years was Charles Lammers, of the facility maintenance staff. Many years after he died his daughters were cleaning his old garage and came across a

small stash of dynamite sticks. They were not sure what they were, but were suspicious and took them to a local fire station. The staff there was rightly concerned and came to the Lammers residence to make a complete inspection of the property for possible other dynamite sticks. Then the sticks were properly disposed with no injury and no formal record of the incident. 

Save the Date - October 25, 2016

Friends members, sponsors and donors are invited to our *Creepy Critters Event* on October 25. You can also enjoy a special tram tour and refreshments at our Friends Annual Meeting. More details to come on the Friends website and email announcements. We hope to see you there!

KID'S CORNER

BALD EAGLE FACTS

Our nation's symbol is the Bald Eagle, which is not really bald; it has white feathers on its head, neck, and tail. The word **bald** in the eagle's name comes from a derivation of **balde**, an Old English word meaning **white**.

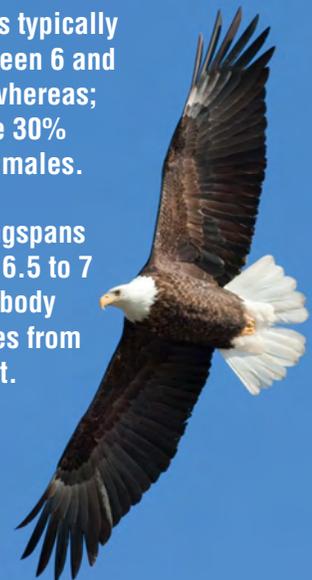


In 1782, the U.S. Congress selected the Bald Eagle as our national symbol because of the bird's long life, great strength, and majestic looks.

There are **8** different species of eagles that inhabit North America.

Male eagles typically weigh between 6 and 8 pounds, whereas; females are 30% larger than males.

Eagles' wingspans range from 6.5 to 7 feet, while body length varies from 3 to 3.5 feet.



Bald Eagles can live up to 30 years in the wild and 48 in zoos.



Bald Eagles feed primarily on fish, but will also feed on ducks, rodents, snakes, and carrion (dead animals).

They are diurnal (day) hunters that can swim, fly 20-40 miles per hour in normal flight, and dive at speeds over 100 miles per hour. Eagle nests are very large (they may use the same nest year after year, adding more twigs and branches each time). One nest found had been used for 34 years and weighed over 2 tons!



The bald eagle belongs to a group of birds known as raptors, or birds of prey that hunt and feed on other animals. They have very sharp vision that allows them to find prey during flight. They also have very strong talons (claws) and beaks. Raptors are important for a healthy ecosystem and by protecting them many other species are protected.

Other raptors include: Ospreys • Kites • Hawks • Harriers • Vultures • Falcons • Owls

We invite you to join!

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



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FRIEND OF PATUXENT BOARD MEETINGS

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 (\$25/yr), gift: FOP bookmark (or other) Family (\$35/yr), gift: FOP decal (or other)

Contributor (\$75/yr), gift: History of Patuxent DVD (or other) Sponsor (\$250/yr), gift: FOP hat (or other)

Life (\$500), gift: FOP shirt (or other) Please size: S M L XL XXL XXXL

Life-65+ (\$300), gift: FOP shirt (or other) Please size: S M L XL XXL XXXL

Donation \$ _____ *Make check to "Friends of Patuxent" and mail to address on reverse side of this page.*

Check here if you prefer not to have a gift, and instead have your entire dues support Friends of Patuxent.

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.

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(Application on reverse side)