

From the Director

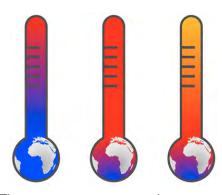
We Must Help Nature Adapt to Climate Change

By Dan Ashe, Director, U.S. Fish and Wildlife Service

he National Climate Assessment released in May puts it bluntly:

Evidence for climate change abounds, from the top of the atmosphere to the depths of the oceans. Scientists and engineers from around the world have meticulously collected this evidence, using satellites and networks of weather balloons, thermometers, buoys, and other observing systems. Evidence of climate change is also visible in the observed and measured changes in location and behavior of species and functioning of ecosystems. Taken together, this evidence tells an unambiguous story: the planet is warming, and over the last half century, this warming has been driven primarily by human activity.

The scientific debate about whether human-induced climate change is occurring - or whether rising average surface temperatures are disrupting the natural systems that support life on Earth - is over. But two significant questions remain to be answered: How catastrophic will the effects of this disruption be? And what can be done to avert the worst impacts and help wildlife and natural systems cope with those that occur?



These are not easy questions to answer. Fortunately, we still have time to act to sustain the web of life that sustains human population.

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The 2014 Patuxent Waterbird Nesting Season

By Frank McGilvrey Volunteer/Biologist

his was the 18th year of monitoring nesting water-birds on the Patuxent Research Refuge. Methods included spring pair counts of nesting water-fowl species, weekly inspections of nest boxes and brood counts. Nesting waterfowl species include Canada goose, wood duck, mallard, hooded merganser, and black duck.

Weather during the nesting season, The Winter Quarter was cold and wet with 40 inches of snow, including four inches in March. This was the eleventh coldest winter on record, followed by the third coldest April on record.

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Meade Natural Heritage Association (MNHA) Not Just a One-Trick Pony!

Brad Knudsen, Refuge Manager

hen most of us think of the Meade Natural Heritage Association (MNHA), we probably think, "Oh, they are the "hunt club" that sells permits to hunt on Patuxent." While that is clearly a huge part of their presence here, there is so much more to MNHA than initially meets the eye.

As a non-profit cooperative association, they support the refuge and wildlife-dependent recreation in a multitude of ways. Their board, members, and volunteers host multiple shotgun qualification days at our shooting ranges, something any hunter planning to hunt deer with a shotgun in Maryland must do annually to show their proficiency. This draws several hundred people to the refuge each fall. They also help with our annual "Wildlife Conservation Day" event in August - providing archery and BB Gun target practice, waterfowl retrieval demonstrations, and exposure to other outdoor recreation opportunities. They are actively engaged in spring wild turkey surveys, helping track population trends on the refuge. MNHA teaches

hunter safety courses to about 150 youth every year, engaging the next generation of outdoor enthusiasts in firearms safety and hunter ethics. MNHA also has hired interns that, this fall, have worked 48 hours per week at our North Tract Visitor Contact Station, providing the ONLY warm bodies there on Sundays since early September, as our own intern program has fallen on hard times due to recent policy changes.

"It just makes you feel good inside and people benefit from it"

One of the more satisfying activities in which MNHA is involved is the state's "Farmers and Hunters Feeding the Hungry" program (FHFH). The program, which provides renewable protein-rich venison to people most in need, started in Maryland in 1997. MNHA became one of its first sponsors.

Hunters can donate legally harvested deer to a collection site, such as the one MNHA manages at our North Tract Hunting Control Station. The deer are processed - skinned, butchered and packaged - and then taken to various food banks in the Washington DC metropolitan area, where they are turned into chili, hamburgers, and other meals that serve the homeless and needy.

Former member Tom Engle first got MNHA involved in this program in 1997. Since then, current members Frank Riffle and John Green have been the "rocks" that have kept this program going at Patuxent. "It just makes you feel good inside and people benefit from it," Riffle explained when asked why he does it. In any given year, Riffle and Green may process between 15-50 deer. Each deer will render about 40-50 pounds of venison. In the program's earliest years, MNHA was contributing nearly 2,000 pounds of venison to FHFH each fall! Last year's donations totaled only about 300 pounds. That still feeds a lot of hungry mouths, Riffle was quick to point out.

From its humble origins in Maryland, this program, or variations of it, has now gone nationwide. Maryland remains among the top providers in terms of numbers of sponsors contributing to this admirable cause.

Chances are if you stop by the North Tract's Hunting Control Station during hunting season, you will find Frank Riffle or John Green - or a new recruit they eagerly seek - in the butcher shed, selflessly processing a freshly harvested deer to be taken to a local food bank. There, someone in need will enjoy a hot meal, courtesy of a hunter's generosity and MNHA's commitment to helping the hungry!

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 11.

The 2014 Patuxent Waterbird Nesting Season

Continued from page 1

Pair counts - Pair counts of nesting waterfowl species are conducted as part of the weekly waterbird census, from mid-March to mid-June. The peak is in mid-April. After that date, early nesters have begun incubation. Late pair counts provide information on renesting efforts. Pair counts provide the most reliable information on nesting populations of resident waterfowl. This has become more important since we have stopped searching islands for nesting geese, mallards and black ducks. It also provides data on the total nesting population of wood ducks and hooded mergansers; box as well as cavity nesters. Canada geese

peaked at 120 pairs, the same as last year. There was a record low of 62 pairs on Central Tract. In the 1990s, the population peaked at 270 pairs. We recorded 68 pairs of wood ducks, comparable to last year. The peak was 82 pairs in 2005 and the low was 55 in 2000. Mallards totaled 16

pairs, the same as last year. There were five pairs of hooded mergansers and two pairs of black ducks, also the same as last year.

Nesting - Nest searches were restricted to boxes. The number of boxes was reduced from 140 to 56. Thirty of the 45 clutches of wood ducks hatched. This was the lowest hatching success ever. Seven clutches were lost to black snakes. No previous year recorded more than two. The same exceptional losses were also recorded in song bird boxes this year. We have been unable to devise a guard to keep the snakes out. The biggest conundrum was the very low return of yearling hens, only nine, near the record low compared to a very high return of older hens. Twenty-five of 35 hens older than two returned; a 71% return. Eight of nine 3 year olds returned as 4 year olds. If there had been a similar return of yearlings we should have had about 20 hens. There were two nests of hooded mergansers in boxes, the same as last year. Both clutches hatched.

Broods - Broods are counted during the weekly waterbird counts and as often as seen during other activities. Research in the 1970s on the Refuge indicated that twice weekly counts are the minimum for accurate records of wood duck broods. There were 27 broods of Canada geese in which at least one gosling reached flight stage. An estimated 45 young were reared. The vast majority were on Central Tract. One pair nested and reared their goslings within a pesticide research area.

No predation there! North Tract broods often disappear. Three broods totaling seven goslings got on the wing on South Tract. We had more broods than last year (16) but poorer survival (50). By contrast, in the peak year of 2004, 275 goslings were reared. The poor wood duck hatching success

was reflected in the number of broods seen. We recorded 33 broods of 100 ducklings, including six cavity hatched broods. Last year, 40 broods with 150 young were reared. We had two broods of mallards. No hooded merganser or black duck broods were recorded.

Other waterbird nests - We continue to have only one osprey nest. Three young were reared. This pair is successful every year, but we never have had a second nest. For the first time since the turn of the century, we had a bald eagle nest on the refuge. One young was reared.

Other species using wood duck boxes - This included one grey squirrel, four tree swallows, two crested flycatchers, and one Carolina wren. Nesting was much lower than previous years; perhaps due to fewer available boxes.

2014 Holiday Bazaar A Huge Success

By Dennis Hartnett

he annual Friends holidav bazaar (version 2014) was a huge success. Under the leadership of Brenda Stone assisted by Jeanne Latham, the bazaar made a profit of over \$2,500! Visitors were greeted by a red and white "North Pole" indicating where each of the various events was located. The bazaar had a variety of vendors selling everything from woodcraft products to handpainted ostrich eggs. The Friends Bazaar committee organized this year's event which also featured a bake sale, Crane Café, crafts sales, "Made by Friends" table, kids shop and a thrift shop. Also featured at this year's bazaar were an origami crafts table and a holiday card making table giving visitors the opportunity to be creative and have fun at the same time.



Michael the wood duck made an appearance as well as live turtles brought by Laurel Harrison, a former staffer. Children had an opportunity to listen to stories about animals and see wild animals up close and personal.

Special thanks goes out to Susan Minter for organizing the volunteer force to help the vendors, set up and break down the event, and all the other various tasks that were needed to assist the visitors. Close to 500 visitors walked through the door during the bazaar. This number was almost an increase of 200 over last year's bazaar attendance.

A special thanks also goes out to the many volunteers, Friends and everyone else who helped make the bazaar the success that it was.

Old Forge Sycamore-A Gentle Giant

Bill Harms, Volunteer North Tract Plant Inventory Coordinator

he North Tract of the Patuxent Research Refuge is the home to a gentle giant called Old Forge Sycamore, a huge American Sycamore (*Platanus occidentalis*) tree located east of the Old Forge Bridge in the bottomland forest along the north bank of the Little Patuxent River.

The Maryland Big Tree Program officially measured Old Forge Sycamore in late October 2014, and found that it was 249 inches in circumference at 4.5 feet above the ground and 112 feet high. Its spread was 117 feet. Using standard big tree point scoring formula¹, it scored 390 points. This placed it as the largest American Sycamore in Anne Arundel County, the sixth largest American Sycamore in Maryland, and the 36th largest tree overall in Maryland.

The best estimate for this giant's age is between 200 and 300 years old.

The American Sycamore is native to Eastern North America, its range extending from Iowa to Ontario and Maine in the north, Nebraska in the west, and south to Texas and Florida. It is often found in riparian and wetland areas. It is common throughout the refuge and flourishes in the bottomland forest areas along the Patuxent and Little Patuxent Rivers.

Old Forge Sycamore is very healthy for its size. The write-up about this tree on the Maryland Big Tree Program's website (www.mdbigtrees.com.) states that our giant sycamore is a "single trunk tree" and in "perfect condition with no evidence of any rot pocket or hollow trunk."

Determining Old Forge Sycamore's age is problematic. Cutting it down and counting the rings is not feasible for obvious reasons. Core sampling and counting the rings is not recommended because of potential harm to the tree and it would not necessarily provide good results. So for now we are stuck with estimating its age. Using a formula from the International Society of Arboriculture² the tree is calculated to be 316 years old. So this means it could have been around in the early 1700's. However, the tree is growing on a favorable site, and



because of this it is probably much younger than 316 years old. So until the tree falls down and someone counts its rings at that time we will never know its exact age. The best estimate for this giant's age is between 200 and 300 years old.

Old Forge Sycamore has the potential to be around for many more years to come because it is so healthy and because of its almost perfect growing location. The tree is growing in an area that is not accessible to the general public, but if you have a chance, see if you can view this gentle giant from a distance. Refuge visitors can view it from Wildlife Loop Road about 500 feet east of the Old Forge Bridge. It is about 300 feet south of the road and there are two posts along the edge of a field marking its location. If you cannot see the tree, you can ask the North Tract Visitor Control Station for specific directions.

¹ The standard formula for determining big tree points is Points = Height in feet + Circumference in inches at 4.5 feet above the ground + (1/4 X Spread in feet). So for this tree, its points are 112 feet + 249 inches + (1/4 X 117 feet) = 390 points.

² The International Society of Arboriculture's standard formula for determining a tree's age is the growth factor by species times the tree's diameter in inches at 4.5 feet above the ground. Since the tree's diameter is 79 inches (circumference of 249 inches/ π (3.14) and the growth factor for American Sycamore is 4, the tree's calculated age is 79 X 4 or 316 years old.

Buy Tiger Stamps at Your Post Office

mericans once again can buy the *Save Vanishing Species* stamp at post offices and online. Funds help conserve some of the world's most iconic and threatened species.

The stamp - known as the Tiger Stamp for its image of an Amur tiger cub - works just like a regular postal stamp but sells at a slightly higher price. The additional money goes to the U.S. Fish and Wildlife Service's Multinational Species Conservation Funds, helping conservation of elephants, rhinoceros, tigers, great apes and marine turtles.



The stamp was created in 2011, but sale was congressionally mandated for only two years. At the end of 2013, the Post Office pulled the stamp. Congress passed legislation that now guarantees four more years of stamp availability.

The Tiger Stamp has generated more than \$2.5 million for international conservation from the sale of 25.5 million stamps. Among the 47 projects in 31 countries supported:

- In the Meghalaya state of India, a stamp-funded project is securing remnant community forests by making them community conservation reserves to be locally managed for the benefit of elephants.
- In Kambas National Park, Indonesia, a key partnership is decreasing human-elephant conflict at the edge of the park by expanding and securing habitat and vital water needs for elephants within the park.
- A landscape approach to conservation of the Cross River gorilla in Cameroon and Nigeria is ensuring the survival of this critically endangered great ape through support for a network of core protected areas and corridors across the Afi Kagwene landscape, managed in collaboration between local communities and governments.
- Mkomazi National Park, Tanzania, and North Luangwa National Park, Zambia, local community education programs are helping reduce the poaching pressure on black rhinos.

The Save Vanishing Species Stamp will be available in U.S. post offices and at USPS.com. To learn more about the Multinational Species Conservation Funds and the Save Vanishing Species, visit: www.tigerstamp.com.

Monarch Migration at Chincoteague

Special Presentation at the Friends Annual Meeting

Jeanne Latham, Patuxent Research Refuge Volunteer

t the October 28th Friends of Patuxent Annual Meeting, nearly 30 attendees including guests and Board members, were treated to a fascinating presentation about monarch butterflies migrating through Chincoteague National Wildlife Refuge in nearby Virginia. Guest speaker Denise Gibbs was introduced by Sparky Sparks, Secretary of Friends.

Denise quickly captived us with her intriguing stories, amazing photos, and her recently discovered facts about monarch butterflies. Denise told us that what got her hooked was a phone call from Dr. Lincoln Brower of the University of Florida, who is considered an expert in monarch butterfly biology.

Although Denise's expertise was as a naturalist, he tapped her interest and inspired her to become a citi-



zen scientist by collecting facts about the migration of monarchs at Chincoteague National Wildlife Refuge on Assateague Island, Virginia. Denise informed us about the incredible method of tagging these light-weight wonders and then monitoring them during their fall migration southward. Through meticulous research experiences day and night, Denise documented exciting facts about monarch behavior including:

- Monarch butterflies migrate over long stretches of water, sometimes at night
- When blown out to sea, may float back to shore on the surface of the water, dry out and continue their migration south
- Monarchs roost on certain plants and trees, which she documented throughout the Refuge property.

This was truly a remarkable presentation and we all appreciated Denise taking time out of her busy schedule to speak with us.

Background Information about Denise Gibbs from the Monarch Watch Conservation Specialists website: http://www.monarchwatch.org/cs/

Refuge System Birthday Bash!

National Wildlife Visitor Center Saturday, March 14, 2015 10:00 am - 3:00 pm

Amy Shoop, Visitor Services

elebrate the Birthday of the National Wildlife Refuge System! See live animals, crafts, hikes, live music and much more! No registration required.

Join Patuxent Research Refuge staff and an amazing core of service and Friends of Patuxent volunteers as Patuxent hosts

the annual Birthday Bash to cele-

brate the National Wildlife Refuge System's 112th Birthday on Saturday, March 14, 2015 from 10:00 am -3:00 pm at the National Wildlife Visitor Center. Each year national wildlife refuges and wetland management districts across the nation celebrate the establishment of America's first national wildlife refuge!

It all started when Pelican Island National Wildlife Refuge, located off the coast of Florida, was established as the first national wildlife refuge which would later become part of the present day National Wildlife Refuge System. Pelican Island NWR was established by Executive Order on March 14, 1903 by President Theodore Roosevelt. This land became the first federal bird reservation and was established to protect brown pelicans and other native birds nesting on the island. This became one of many lands and waters to be set

aside by the federal government for the protection of wildlife.

Today, the National Wildlife Refuge System comprises over 560 national wildlife refuges and 38 wetland management districts that protect over 150 million acres of land and water habitat to support thousands of species. To be more specific: "National wildlife refuges provide habitat for more than

700 species of birds, 220 species of mammals, 250 reptile and amphibian species and more than 1,000 species of fish. More than 380 threatened or endangered plants or animals are

protected on wildlife refuges. Each year, millions of migrating birds use refuges as stepping stones while they fly thousands of miles between their summer and winter homes."

Plus, refuges welcome over 45 million visitors a year with at least one refuge in every state in the U.S. to visit. That is a lot to celebrate!

Information and quotes obtained for this article can be found at https://www.fws.gov/refuges/index.html Check it out!

If you would like to volunteer to help with events such as this one, please contact our Volunteer Coordinator Diana Ogilvie at Diana_Ogilvie@fws.gov.

Visit us on Facebook and Twitter

https://www.facebook.com/PatuxentResearchRefuge https://twitter.com/USFWSNortheast/status/78546358377783296

Patuxent Wildlife Research Center Highlights

Jenn Hill

here are many happenings to highlight for USGS, however here are two that stand out. The first is that November 6th marked a small, family oriented rededication of the Conservation Heritage Trail on the South Tract. The trail was re-dedicated in honor of former Center Director, Greg Smith. Greg was instrumental in the revitalization of the trail which highlights the many conservation heroes that have contributed to the protection and conservation of natural resources. Take some time to visit the 1/4 mile trail that speaks volumes to the conservation community of which Patuxent is a part.

Secondly, a new book is out that features the beloved Whooping Cranes and their mighty heroes the Sandhill Cranes. *Unlikely Heroes: 37 Inspiring Stories of Courage and Heart from the Animal Kingdom*, by Jennifer S. Hol-

land, features a story telling of the heroic work the "Cooperative" Sandhill Cranes perform by serving as surrogate



parents and mentors for the endangered Whooping Crane chicks. The story highlights John French and Brian Clauss both employees of USGS. The **Wildlife Images Bookstore** will be selling copies of this inspiring book if you would like to purchase your own copy! You may also learn more about the book by visiting the link below.

http://www.npr.org/blogs/13.7/201 4/10/09/354635652/when-dogscats-and-rats-come-to-the-rescue

Books to Inspire, Delight, and Teach

by Pat Simon, Bookstore Volunteer

f the last weeks of winter have you thinking of spring and making plans for when the weather is warmer, you might want to stop by the Friends' Wildlife Images bookstore in the Visitor Center for a good book about nature, gardening, hiking, or exploring the outdoors. The store's inventory of books, for both children and adults, has been changing and growing over the last few months so chances are you will find something new to add to your bookshelf. Here are a few staff favorites that are just a sampling of the variety of titles on the shelves.

Especially For Children

Mother Monarch. Mindy Lightipe. Colorful illustrations and lively text take one through the lifecycle of the monarch butterfly—from the mother laying eggs, to a hatching caterpillar, to pupating into a chrysalis, and a new generation including the monarch's amazing migration. \$19.99

Monarch and Milkweed. Helen Frost. Beautiful jewel toned illustrations help tell the story of the relationship between migrating monarchs and the milkweed plant. \$17.99

Bee Life. (from the Small Life Series). This easy to read text with stunning illustrations that include amazing close-ups of bees, tells the story of the life of bees. The text is punctuated with notes and fun facts about bees. \$12.99

Finding Birds in the Chesapeake Marsh. A child's first book by Zola Aiken with illustrations by David Aiken. A birding adventure on the eastern shore with sightings of snowy egrets, green herons, bald eagles, Canada geese and more. Colorful illustrations show the birds in their habitats. A must have book for any child in Maryland. \$11.95

Osprey Adventure by Jennifer Keats Curtis. A boy and his father help



an osprey by cleaning trash from its nest. One of many sensitive books by this author about animal rescue. Her other books include Baby Owl's Rescue, Turtles in my Sandbox, Animal Helpers: Wildlife Rehabilitators. \$13.99

In My Backyard. Valarie Giogas. Illustrations by Katherine Zeneca. A beautifully illustrated counting book with extra activities to continue learning about the animals in the story. This is just one of many books by Sylvan Dell Publishing that teach children about animals and nature through engaging stories with lifelike illustrations, followed by additional learning activities. \$9.95

Thornton Burgess Animal Stories. Set of six books/\$12.00. Stories from a classic nature writer that teach children a love of nature and conservation. Also in stock, The Burgess Bird Book for Children, \$9.95 and The Burgess Animal Book for Children, \$8.95.

For Children, Parents, Grandparents, and Educators

The Nature Connection. An Outdoor Workbook for Kids, Families and Classrooms. Claire Walker Leslie. The author of the classic book, Keeping a

Nature Journal has now written a book to guide children to become naturalists-in the sense of becoming aware of and learning about nature. Her approach combines observational activities with journaling and field note prompts. The book includes a variety of activities, a month to month guide to exploring the outdoors, plus extensive resources and notes for parents and educators. \$15.95.

A Walk in the Woods: Into the Field Guide. Emily Laber-Warren. A guide for children, educators, and parents to observing plants, animals, trees, and rocks that you would observe on most any walk in the woods. This small book has been a favorite with educators who have stopped into the store. \$9.99.

The Family Butterfly Book. Projects, Activities, and a Field Guide to 40 Favorite North American Species. Rick Mikula. Projects showing how to identify, attract, care for, and raise butterflies. With 40 species profiles. Full color photographs, drawings and maps. \$16.95.

Looking to Spring

Attracting Native Pollinators.

Protecting North American Bees and Butterflies. A Xerces Society Guide. This 384 page book is truly everything you want or need to know—from how pollination works and why it is important to creating pollinator-attracting habitats, and taking action to affect policy change on a local, national international scale. \$29.95

A Natural History of North American Trees. Donald Culross Peattie A beautifully written look at the natural history of North American trees that combines science, natural history, and American history. This classic

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Patuxent Research Refuge Public Events for 2015

Refuge System Birthday Bash!

Saturday, March 14, 2015 10:00 am - 3:00 pm National Wildlife Visitor Center

Live animals, live music, children's activities and crafts, wildlife habitat tram tours. (\$).

FREE; 301-497-5887

http://www.fws.gov/refuge/patuxent/

Kids' Fishing Day

Saturday, June 6, 2015 8:30 am - 12:00 pm National Wildlife Visitor Center

Fishing demonstrations and instructions for ages 15 and under.

Catch and release fishing only.

Pre-registration required. Check website for details.

FREE; Call 301-497-5887 to register starting May 1, 2015 at 9:15 am. Space is limited. http://www.fws.gov/refuge/patuxent/

Wildlife Conservation and Recreation Day

Saturday, August 15, 2015 10:00 am - 2:00 pm Patuxent North Tract Entrance

Learn about wildlife conservation and recreational opportunities through habitat exploration, children's crafts, fishing, archery and firearm demonstrations.

Check website for details closer to the event.

FREE; 301-497- 5770; http://www.fws.gov/refuge/patuxent/

Patuxent Wildlife Festival

Saturday, October 17, 2015 10:00 am - 3:00 pm National Wildlife Visitor Center

Enjoy live animals, children's crafts, tram tours (\$), scientific demonstrations, and behind-the-scenes research tours of the USGS Patuxent Wildlife Research Center.

See where endangered Whooping Cranes and Sea Ducks are raised and studied.

FREE; 301-497-5887; http://www.fws.gov/refuge/patuxent/

Friends of Patuxent Wildlife Holiday Bazaar

Saturday, November 14, 2015 9:00 am - 4:00 pm National Wildlife Visitor Center

Shop for wild and not-so-wild, new and gently-used treasures.

Find unique gifts and at the same time support the Patuxent Research Refuge and the Patuxent Wildlife Research Center. 301-497-5789; www.friendsofpatuxent.org

The National Wildlife Visitor Center is located off of Powder Mill Road between the Baltimore/Washington Parkway and MD Rt. 197 south of Laurel.

Visit http://www.fws.gov/refuge/patuxent/ or call 301-497-5887 for more information.

The Patuxent North Tract entrance is located of MD Rt. 198 between the Baltimore/Washington Parkway and MD Rt. 32 east of Laurel.

Visit http://www.fws.gov/refuge/patuxent/ or call 301-497-5770 for more information.

Event participants with special needs should contact the Refuge at 301-497-5887 at least two weeks prior to an event to request special accommodations.

Maryland Honey Harvest Festival-A Unique Experience for One and All

By Dennis Hartnett

n September 20, 2014, the annual Maryland Honey Harvest Festival was held at the National Wildlife Visitor Center. The Maryland Beekeepers Association hosted this event, which included a number of special and unique activities. There were demonstrations by beekeepers on extracting honey from hives, making beeswax candles and raising honeybees.

During the event, the staff and volunteers of Patuxent held interpretive shuttle tours, and provided arts and crafts for children. Local honey and hive products were for sale in the lobby, and the Crane Café, run by the Friends of Patuxent was in operation with a lunch menu.

The participants had the unique experience of watching bees communicating with each other and viewing beekeepers in action.

The Big Sit 2014 We Came, We Sat, We Counted!

Ross Feldner, Big Sit! Event Coordinator 2014

he Patuxent Research Refuge once again took part in the 2014 Big Sit and despite a soggy, drizzling day, visibility and equipment restrictions, our group reported a tally of 31 species of birds in about 4 hours!

The Big Sit! is an annual, international, noncompetitive October birding event hosted by Bird Watcher's Digest and founded by the New Haven (CT) Bird Club. The National Wildlife Refuge System has adopted it as an activity for National Wildlife Refuge Week.

The idea is simple - Identify a 17 foot diameter circle near the National Wildlife Visitor Center, set up chairs, binoculars and spotting scopes, and identify as many birds as you can.



Dave Burgevin uses the refuge's new spotting scope to zero in on a Great Blue Heron.

After deciding to move our 'circle' from it's original position near the Loop Trail to the back of the Visitor Center due to the rain we began our tally of bird species which included Ruddy Ducks, Pied-Billed Grebes, Ring-Necked Ducks, Great Blue Herons (we observed one gulping down a frog for breakfast!), an Osprey, Lesser Scaups, a Red-Shouldered Hawk, a Red-Tailed Hawk, a Blue Grosbeak and many others.

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Reflections From A Fall Intern

By Natasha Shangold

eing the Fall Environmental Interpretation Intern was quite the experience. From the moment I stepped into the National Wildlife Visitor Center, I gained a sense of a close knit community. I was quickly given assignments left and right, first being the Honey Harvest Festival and then the Brownie Scouts Bugs Workshop. I even led my first tram tour on my first day. For the Honey Harvest Festival, I cut out over what felt like a million yellow circles, black legs, and coffee filter wings. However, the cramps in my hands were worth the happiness I knew children would feel, and that to me is priceless. I helped with the Brownie Scouts Bugs Workshop. Although it was on a Saturday, a day I was not scheduled to intern, it was fun teaching the Brownie Girl Scouts about the differences between spiders and daddy long legs.

Every Sunday, I looked forward to distributing the weekly schedule to everyone, and updating the conference room schedule white board. Much of my days were spent planning the Webelos Forester Workshops, and planning my first interpretive program, Nature Tots: Changing Colors. This program teaches three to four year olds about autumn and was quite a challenge. Collecting different colored leaves and making leaf rubbings with them was so much fun. And then there was the Patuxent Wildlife Festival, which was an exciting day. From selling bus tickets to view the Whooping Cranes or leading a tram tour, I enjoyed what the day had to offer.

When I was a judge for the Science Bowl, I had no idea what to expect. I was on the edge of my seat the whole time when there was a tie during the third round. And then there was The Bear Workshop, which was very interesting. Making pinecone bird feeders was the best part. I even enjoyed being a puppeteer during the "Who's Afraid of the Little Brown Bat" puppet show. Lastly, I had fun with my Hiding Hibernators program, and looking for signs of hibernation with five to seven year olds.

So thank you to all who mentored and supported me during my internship. I could not have done it without you. 🖊



Winter 2015 in the Hollingsworth Gallery

Faith Leahy-Thielke, Patuxent Research Refuge Volunteer

his coming winter's exhibits should provide a big draw in the Center's gallery. Patuxent's staff are featured in January. Joseph Giitter, a prior exhibitor who described his December 2012 show as his "first major nature exhibit", will return in February. Kathleen McConnell, who actually resides on our Laurel tract, will contribute her oils in March.

Jonathan Male, Sam Droege, Johanna Lutmerding, Diana Ogilvie, Jen Hill, Dennis Hartnett and Dr. Jeff Hatfield have all indicated they'll be exhibiting their work. The latter four have described what they'll be contributing. Diana Ogilvie has worked at Patuxent since 2009. She currently serves as a Visitor Services Park Ranger and Volunteer Coordinator. When her family gave her a Nikon point-and-shoot as a gift, she was unstoppable! Not just our "shared essence and universal connectedness with wildlife", but sometimes "embarrassing" family moments were ones she captured digitally! She relates a problem last year in Antarctica: removing gloves and snapping pictures before frostbite sets in can be complicated by an enterprising penguin! She'll display some shots from that marvelous experience. Jen Hill is a current employee at the Refuge who first came to Patuxent as an intern in 2003. She'd studied natural resource management and forestry in South Africa as well as in this country. She's worked in landscaping and traveled on mission trips. Along the way, she always sketched. Jen describes these sketches as mostly unfinished - collected often on scrap paper or the backs of meeting agendas. These days she's part time at the refuge - so she can be with her children - "human and fur"! Dr. Jeff Hatfield has been a quantitative ecologist for the U.S. Geological Survey at Patuxent since 1988. He

researches endangered birds and their habitat, and conducts vegetation studies in Maryland, Texas and ... Hawaii! There and here in Maryland he has studied Chinese watercolor painting. The red stamps on most of his work represent his first and last names in Chinese. He'll display paintings of wildlife and exotic flowers and plants. Dennis Hartnett is the Environmental Education Coordinator for the Patuxent Refuge. In 2005, he too, began as an intern, but moved into a permanent po-

When her family gave her a Nikon point-and-shoot as a gift, she was unstoppable!

sition in 2011. He writes that he is an amateur digital photographer who enjoys "being outdoors observing nature". He'll be submitting photos of wildlife taken over the last few years.

February marks the return of Joseph Giitter, the founder of Bohemian Photoworks of Rockville. In December 2012, we enjoyed his "Impressions of Nature". Although he is an experienced professional portrait photographer, Giitter writes that he has been increasingly drawn to wildlife and nature photography. His February exhibit will feature "unique wildlife portraits", and the "special places that they depend on for their survival". He'll include several awardwinning photos including one of bald eagles at Blackwater that graced the cover of the 2012 Chesapeake Bay Report Card - and one of sandhill cranes featured on the November/December 2014 issue of the National Wildlife Federation Magazine.

March features the oil paintings of Kathleen Marshall McConnell. She

began her artistic journey studying the techniques of the Old Masters at the Conrad-Miller studio in Fells Point. The Baltimore native was drawn however by the peace and solitude of Maryland's Eastern Shore. She followed her family to Bozman and Snow Hill. Later, she studied at the Beartooth School of Art in Montana where she enjoyed the tutelage of artists she describes as great. Her work hangs in private homes on the "shore" as well as in Ocean City's Hilton Hotel and "preferred" galleries.

Calling for Your Articles and Photos Please

e'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, cute wild critter, 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 or jelatham@verizon.net. Thank you so much!

We Must Help Nature Adapt to Climate Change Continued

Continued from page 1

The U.S. Fish and Wildlife Service is working with the scientific, conservation and business communities to prepare for these impacts and ensure forward-thinking and effective conservation of fish, wildlife and plants, and their habitats. Guided by the President's Climate Action Plan and the National Fish, Wildlife and Plants Climate Adaptation Strategy, we are leading efforts to protect natural resources.

The scale and intensity of climate change impacts pose an enormous challenge.

But there is hope, and we are making progress. Here are a few examples:

 At Neal Smith National Wildlife Refuge in lowa, the Service and partners are finding that restoring diverse, native tall-grass prairie vegetation helps protect the soil year-round, slowing overland flow of water. It also helps recharge groundwater and provide important habitat. By planting trees at refuges in the Red River and Lower Mississippi River valleys of Louisiana, the Service and partners are reducing greenhouse gases in the atmosphere and restoring habitat that feeds and shelters songbirds and other wildlife. Similarly, refuges in Texas, Hawaii and Kansas are planting trees to restore habitat and reduce greenhouse gases.

The scale and intensity of climate change impacts pose an enormous challenge.

- Refuge managers in North Carolina and Virginia are helping to restore the natural hydrology of peatland ecosystems, which reduces fire potential and cuts carbon emissions.
- In California, refuge staff, Coastal Program staff and partners have been working to raise the elevation of former salt marsh areas around Humboldt Bay that have experienced significant subsidence. This project has helped offset the loss of approxi-

- mately 95 percent of historic salt marsh around the bay, and builds resiliency to climate change and sealevel rise by providing areas for salt marshes to migrate to behind dikes.
- Biologists and university researchers have been monitoring the ecological impacts of climate change, such as the rising treeline in the mountains and American marten colonization of the lowlands, at Kenai Refuge in Alaska.
- The Refuge System has worked to reduce its carbon footprint by purchasing hybrid vehicles, constructing low-energy "green" visitor center/headquarters buildings and installing renewable wind and photovoltaic systems.

What happens in the next few decades will have profound implications for society. How we choose to respond here and now - or whether we respond at all - will determine the kind of world in which we and our families live for the foreseeable future, as well as the kind of world we leave to future generations. Everyone has a stake in the outcome of those efforts - and we must succeed.

JOIN TODAY!

MEMBERSHIP APPLICATION

Name:					
Address:					
City:		State: Zip:			
(E-mail address will not be	sold or shared. and Refuge announcements		FRIENDS OF PATUXENT		
Phone: (opt.)					
	☐ Individual (\$15/yr)☐ Life (\$500)	• (• ,	☐ Contributor (\$50/yr)		
Make check to "Friends of Patuxent" and mail to address on page 16.					
☐ Check here if you would like save a tree by reading our quarterly newsletter online.					

Delmarva Fox Squirrel Removed From Endangered Species List

he Delmarva fox squirrel, one of the first animals protected under the federal Endangered Species Act a half-century ago, has rebounded, prompting federal Interior Secretary Sally Jewell's announcement that it will be removed from the Endangered Species List.

"The Delmarva fox squirrel is a perfect example of how the Endangered Species Act works not only to pull plants and animals back from the brink of extinction but can also provide flexibility to states and private landowners to help with recovery efforts while at the same time supporting important economic activity," Jewell said.

Federal officials believe that the recovery both in squirrel numbers and re-expansion into its native range make the species able to withstand future threats.

One of the animals on the first list of endangered species nearly a half century ago, the squirrel has recovered across many parts of its historic range.

Larger than other squirrel species and generally not found in urban areas, the Delmarva fox squirrel ranged throughout the Delmarva (Delaware, Maryland, Virginia) Peninsula before experiencing a sharp decline in the mid-20th century due to clearing of forest for agriculture and development, short-rotation timber harvest and over-hunting. The population fell to 10 percent of its historic range, confined mostly to remote areas of Maryland's Eastern Shore because of habitat loss and hunting presure. The animal was listed as an endangered species in 1967. The squirrel was one of 67 species listed under the Endangered Species Preservation Act in 1967, the predecessor law of the Endangered Species Act, which was enacted six years later.

The regional population of fox squirrels has increased from that 10 percent fig-



ure in 1967 to 28 percent according to Cherry Keller, a biologist with the U.S. Fish & Wildlife Service.

More than 80 percent of the squirrel's habitat is on private land. Since its listing, the squirrel's range has increased from four to 10 counties in the Delmarva Peninsula. Efforts contributing to recovery include translocation of animals to establish new populations, closing of the targeted hunting season, growth and

dispersal of the population, and protection of large forested areas for habitat.

You can see the squirrel on several national wildlife refuges: Blackwater in Maryland; Chincoteague in Virginia; and Prime Hook in Delaware.

In its 2012 five-year review, the Service followed a rigorous process to assess the Delmarva fox squirrel's extinction risk: http://www.fws.gov/midwest/endangered/recovery/5yr_rev/index.html.

For more information the Delmarva fox squirrel see:

Recovery fact sheet: http://www.fws.gov/endangered/esa-library/pdf/recovery.pdf

Web site: http://www.fws.gov/chesapeake-bay/EndSppWeb/DFS/index.html /

Around the Refuge



Monarch butterfly caterpillar on a milkweed in the schoolyard habitat



Downy sunflowers (Helianthus mollis) in the Monarch Waystation in the North Tract



Assassin Bug impaling a bumble bee



Old military road that is now a path

Photo by Joe DiGiovanni

Blast From the PastReprinted From November 1996 issue

By Carolee Wende

ometimes I think we have the calendar order of the seasons a little confused. Personally, I think that we should consider autumn the first season of the year - and not just because there are so many birth-days in my family during this season!

I am writing as we head into the last week of September. The autumn equinox has just passed, and our days are getting shorter. The sun's longer rays flood our morning and evening drives with a radiance like no other time of the year. Add to that the brilliant reds, yellows and oranges of the maples, oaks, poplars and dogwoods, and you see colors that neither Van Gogh nor Rembrandt ever captured. The glorious colors and the crispness in the air

revitalize the laziness that summer lulled us into.

However, my point in wanting to change this seasonal order comes from a professional point of view, as in "real life", I am a microbiologist. Last week, I "did" two tram interpretations, and noticed that the skunk cabbage had just about disappeared for its annual

hibernation. As we passed through the forest areas and rode past the impoundments with some of our feathered migratory guests, the seasonal change was evident. But I hit my stride when we enter the forests, with their floors becoming velvety with fallen leaves and branches, and the mushrooms and bracket fungi popping up. I always automatically start rambling on about how important microbes are in the eternal cycle of life on this planet when the tram tour enters its "decomposition area", for



this decomposing matter, or detritus, forms the base for all of our aquatic and terrestrial food webs.

Now, with falling leaves, harvested plants, seeds primed for plucking or replanting, animals and birds readying themselves for their "long winter's

nap", it seems that we should consider autumn as the season of prepa-

ration. This is the time when nature makes ready for what is to come. It is a time when we inaugurate the first steps in the annual cycle of incubation, birth, growth and maturation. It is a time of advent, if you will:

the first season of the year.

So, little bacteria and fungi and viruses - do your thing! Chomp up those leaves and snake skins and the remains of the

eagles' lunches! Follow through with

your recipe which provides the rich nutrients for our beautiful wetlands and marshes and forests - show us how to REALLY recycle and provide for our future. Help us celebrate the beauty of the circle of life as we prepare for the

vear to come.

Happy New Year, Mother Earth! 🖊

Selection From the Annual Environmental Film Festival in the Nation's Capital to be Shown at Patuxent

By Lisa Bierer-Garrett

he film for the 2015 Film Festival we have selected is *Field Biologist*, an award winning film about a young man who goes to Costa Rica and sets up a bird banding lab on his family's land. It is funny, inspiring and has beautiful bird photography.

We will have the filmmaker Jared Fisher, available to come be our guest speaker! We may also have the star, Tyler Christensen of *Field Biologist*, if his schedule allows (TBA).

I also plan on inviting our USGS Bird Banding Lab to have a display. I want to invite a bander from the Lab to also speak at the event.

Right now we are looking at 1 pm on Saturday March 28th as the tentative Festival film viewing time.

If there are any FOP volunteers that would like to help as ushers, AV help, publicity, or any other support we would be happy for the help!

This has been a great event that brings in lots of new visitors from the DC metro area to our beautiful Visitor Center. Come on out and support the Festival.

For more info on the entire film festival schedule go to http://www.dcenvironmentalfilmfest.org/



Friends of Patuxent Hosts 2014 Wildlife Holiday Bazaar

by Lisa Bierer-Garrett

udos go to Brenda Stone and the Wildlife Holiday Bazaar Committee for a very successful event. Many Friends of Patuxent and Patuxent volunteers came out to support the event that was held on November 15th, 2014.



The variety of handcrafted merchandise provided by the vendors was amazing, from beautiful painted ostrich eggs and hand carved objects to painted, woven, knitted and quilted items of wonderful quality.

There was a Friends thrift shop with many kinds of donated items and a bake sale. There were kids craft tables and kids gift shop in two areas, and so much to choose. It was a very good event for the discerning shoppers that came out. We had almost 500 folks attend and the vendors were very happy overall. The Wildlife Images Bookstore also had brisk sales.

Volunteers helped with food, crafts, directions, children's programs, money handling and so much more. It was a busy event and a good fundraiser for the Friends.

Tom and Evelyn Kirby really stepped up. Tom was festively dressed with a Santa hat working in the kids' area, Candy Cane Lane. Evelyn was called in, at the last minute to manage the bake sale and Crane Cafe. With help from Lucy Grimes, the ladies cooked and sold about 70 hotdogs, drinks and over a hundred tasty snacks! Several other volunteers and I helped man the bake sale, which sold out by 2 P.M. Wow.

I was asked to read for the Story Time, and happily obliged. There was a good turnout for story times and also the live animal show provided by Laurel Harrison.





Many volunteers were asked by terrifically organized Volunteer Coordinator, Susan Minter, to pinch hit in a variety of tasks.

The total profit for the event was about \$2,600 dollars. Brenda Stone, the event coordinator, felt she had met the event goals with terrific attendance numbers, happy vendors and a good profit for the Friends of Patuxent and the Refuge. Next year's date is picked for November 14, 2015.

It is events like this that let general visitors see the true face of Patuxent volunteers and staffers that keep the National Wildlife Visitor Center open on a daily basis, and showcase their love of this place.

I'm glad I got to be a part of a great kickoff for the Holiday Season. 🖊

Want to Teach Others About Wildlife? Read On!

re you or someone you know interested in gaining experience as an outdoor educator? Then look no further than the Visitor Services and Environmental Interpretation internships at Patuxent Research Refuge! Educators at Patuxent develop and conduct creative nature programs, tram tours and puppet shows for visiting children and families, programs for Scouts and school groups, learn the daily operations of a visitor center and much more! We are currently looking for motivated and enthusiastic individuals to fill these internship positions. Positions are non-paid part time to full time opportunities that include weekdays and weekends. Interns are eligible for free on-site housing. If you or someone you know may be interested visit our website for internship dates and application requirements. Don't delay as application deadlines are fast approaching!

http://www.fws.gov/refuge/Patuxent/what_we_do/internships.html

More interested in Biology? You can find those opportunities also listed at the above link.

Books to Inspire, Delight, and Teach

Continued from page 7

book will keep you occupied for hours or you can extend the pleasure of the author's poetic prose by reading one short essay at a sitting. \$18.95

Naturescaping Workbook: A Step-by-Step Guide for Bringing Nature to Your Backyard. Beth O'Donnell Young. A gardening book for creating a garden that is a haven for birds, bees, and butterflies, and that requires little weeding pruning, or mowing. Includes plans, plant lists, resources, and photos. This book is sure to inspire you to take another look at your garden. \$24.95.

Country Walks Near Baltimore. \$14.95 and Country Walks Near Washington \$19.95. Longstanding, detailed, frequently updated, totally reliable guides by Alan Fisher to places to walk in the Baltimore and Washington environs.

The Complete Book of Hummingbirds. Tony Tilford. A detailed guide with close up photos of hummingbirds that range from Tierra del Fuego to Alaska. \$19.95

And finally, don't forget that the store has an extensive selection of Field Guides as well as plastic-coated, waterproof Folding Guides that are perfect to slip into your backpack as you walk the refuge.

We came, We sat, We counted!

Continued from page 9



L-R: Larisa Ford, visitor and Park Ranger Amy Shoop getting a better look.

The results were tallied and reported to the Big Sit website which you can view at http://www.birdwatchersdigest.com/bwdsite/connect/bigsit/index.php?sc=migration.

Thanks to our volunteers and Park Ranger Amy Shoop, who with their humor, birding skills and camaraderie brightened the day and helped make the event fun and successful. Although we didn't get a high number of participants, the ones that came were enthusiastic and had a great time. Several families visited the sit with one boy remarking "Look at the birds!" with a *Sense of Wonder* that would make Rachel Carson proud.



L-R: Stephanie Everett, visitor, Larisa Ford and Park Ranger Amy Shoop consult a field guide.

Photo by Ross Feldner



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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 Number is 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