

A quarterly newsletter for Volunteers and Friends of the Patuxent Wildlife Research Center and Patuxent Research Refuge



FRIENDS OF PATUXENT

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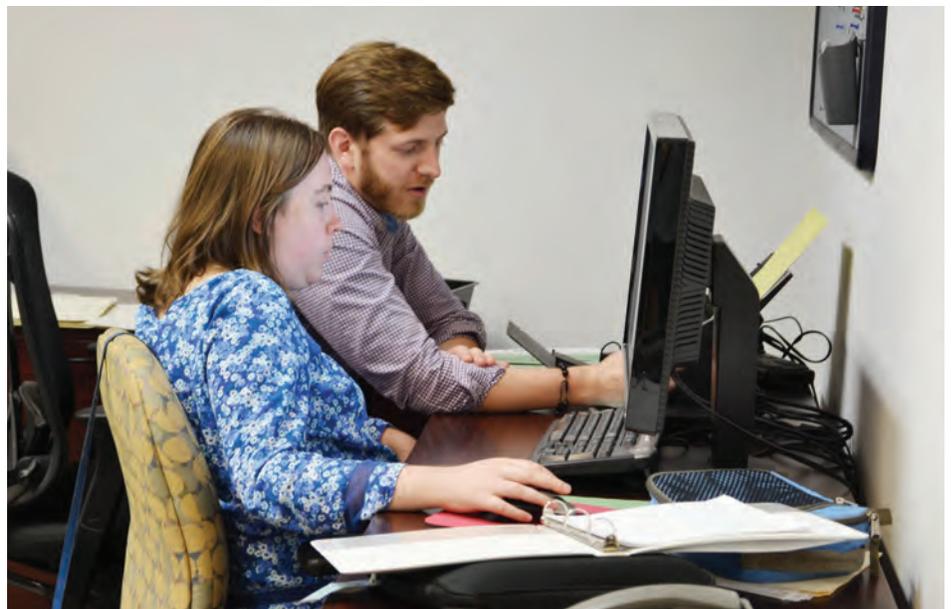
The Bird Banding Laboratory Welcomes Three New Students to Digitize Legacy Data

by Chelsea Steinbrecher-Hoffmann, Bird Banding Lab Contractor Biologist, Patuxent Wildlife Research Center

Two new students started working on the Band-Scan Project in January 2020 and a third joined in early February, through the Secondary Transition to Employment Program – USGS Partnership, or STEP-UP. Since 2015, Patuxent’s Bird Banding Lab (BBL) has been working with Fairfax County Public Schools to provide hands-on job training to students, age 18-22, with cognitive and/or physical differences. Students are trained by both BBL staff and special educators to scan and catalogue bird banding records collected across North America from 1960 to 2000. These records are considered legacy data as they are not in a digital, accessible format. The Band-Scan team consists of current STEP-UP students and STEP-UP graduates who are now part-time employees at USGS Reston. They have scanned and catalogued more than 750,000 out of an estimated 1.5 million sheets of legacy bird banding data. This is more than 40 full four-drawer-filing-cabinets scanned so far, obviously a very productive team!

The BBL is one of several USGS programs nationwide taking part in

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Fairfax County educator, Andrew Garcia, provides additional training support to student participating in the Band-Scan Project

Chelsea Steinbrecher-Hoffmann, USGS Patuxent Wildlife Research Center. Public domain.

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The Bird Banding Laboratory welcomes three new students to digitize legacy data

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STEP-UP. The program is geared towards teaching students not only technical skills for the workforce, but also the professional social skills needed to navigate an office environment. STEP-UP participants each have an Individualized Education Program (IEP) designed in conjunction with their teachers and parents to achieve personalized goals. IEPs were set up under the requirements of the Individuals with Disabilities Education Act. An important part of the IEP is a transition plan aimed at preparing each student to become an independent young adult.

Chelsea Steimbacher-Hoffmann, USGS Patuxent Wildlife Research Center. Public domain.



Many students have vocational training as a goal in their IEPs. While transitional assistance is required for students with an IEP, finding host sites for vocational training can prove to be a challenge for special educators. The vocational training the students receive on the Band-Scan Project and other STEP-UP projects satisfies this goal. To date, USGS is the only partner organization with Fairfax County Public Schools to provide these students with vocational training in a federal STEM setting. Since USGS Headquarters partnered with Fairfax County Public Schools in 2012, the program has proven to be a great success, expanding to sites in Arizona, California, Colorado, Massachusetts, Ohio, and Utah. 🐾

Friends of Patuxent Join Planning for Centennial of Bird Banding Lab

by Rich Dolesh, Chair, Friends of Patuxent

The 100th anniversary of the Bird Banding Lab (BBL) will be observed in 2020 and Friends of Patuxent is planning to support the US Geological Survey (USGS) and US Fish and Wildlife Service (USFWS) in observing the Centennial in a variety of ways.

The Bird Banding Lab was founded in 1920 after the ratification of the Migratory Bird Treaty Act in 1918. It operated out of Washington, DC, until WWII when it was moved to what is now the Patuxent Research Refuge of the USFWS.

The BBL supports the collection, archiving, management, and dissemination of information on more than 77 million archived band records and 5 million records of bird encounters throughout North America. More than 1 million bands are distributed to licensed bird banders annually who return about 100,000 records of banding and bird band encounters, providing vital information on the status and trends of resident and migratory birds.

The history of the Lab and the work of the scientists who created and manage the bird banding program is a fascinating story, much of which occurred here at Patuxent. The USGS and USFWS are planning a variety of ways to tell the history and describe the present work of the BBL during the coming year including a special day of programs and demonstrations at the refuge which is tentatively scheduled for Saturday, September 26, 2020. Note the date and look for more information in the Friends newsletter and on FOP website at www.friendsofpatuxent.org.

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

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

Editor, Friends of Patuxent Newsletter
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 11811 Ivanhoe Street
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Or email to ross.feldner@verizon.net

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

Article submission deadlines:

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

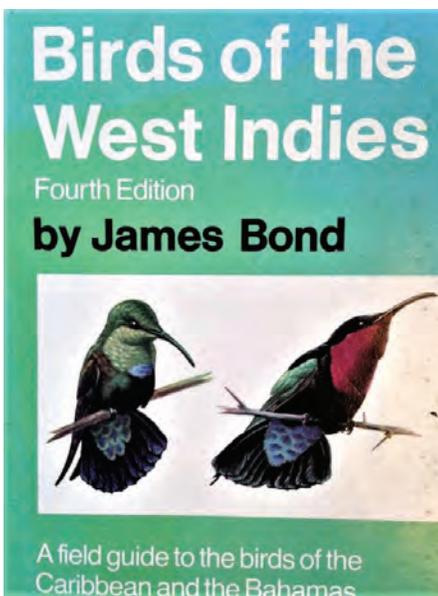
To become a member of the Friends of Patuxent or send a donation, please see "Membership Application" on page 19.

Double O Seven Bird Trivia

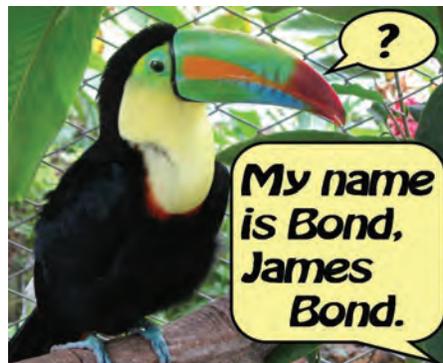
by Matthew C. Perry, Ph.D., Director, Friends of Patuxent Board

The name James Bond makes most folks immediately think of a special agent with the official number 007. But in bird circles, especially Caribbean birds, the name is identified with an ornithologist and author of a bird guide. On the surface there would appear to be no connection with the two persons. But there is a connection and it has some trivial bird history. Ian Fleming, the author of the books that became popular movies with many starring actors playing the role as James Bond, was a bird enthusiast. He was living in Jamaica in 1953 while writing his first book, "Casino Royale." Fleming was searching for a name of the main character and his eye caught the bird book on his desk. The book author was James Bond, and Fleming liked the name for its "simplicity and masculinity" and proceeded to use it in his novels.

The real James Bond was an ornithologist and author of "Birds of the West Indies." He was born in Philadelphia in 1900 but was living in Jamaica at the time when Fleming was there. Mr. Fleming contacted Mr. Bond and asked if he had any problems with



Ornithologist James Bond (1900-1989).



him using his name as the fictional British spy. He got a simple reply, "Fine with it." Fleming met Bond and his wife several years later and they produced a short documentary video together.

Fleming's interest in birds is detected throughout his novels and in some of the subsequent films. In the novel "Dr. No," Fleming references a large bird sanctuary on Dr. No's island in the

Bahamas. A lecture by the ornithologist, James Bond, on bird guano (of all things) also is part of the background and plot of the "Dr No" spy novel by Fleming. In the 2002 film "Die Another Day," the fictional James Bond, played by Pierce Brosnan, can be seen reading the book, "Birds of West Indies," with the author's name obscured. Later in the film when he meets the female star Jinx (Halle Berry) he introduces himself as an ornithologist.

Ian Fleming gave James Bond a first edition copy of "*You Only Live Twice*" signed, "To the real James Bond, from the thief of his identity." The book was put up for auction in 2008 and was sold for \$84,000. James Bond died in 1989 in Philadelphia where he was born. Ian Fleming was born in London in 1908 and died in Kent, UK, in 1968 after having a heart attack. They were two bird men with different interests who "bonded." 🐾

“Bomber”-The Patuxent Eagle

by Matthew C. Perry, Ph.D., Director, Friends of Patuxent Board

In the 1960s, there was a great interest nationwide concerning the status of bald eagles, our national bird. The population status of the eagles was being well documented by federal and state biologists and it was soon obvious that a major problem existed in all states, excluding Alaska, where eagles were abundant, and Hawaii, which had no eagle population. For reasons unknown, there was a lesser problem with eagle populations in the Great Lakes States of Wisconsin, Minnesota, and Michigan.

Soon Patuxent biologists were heavily involved with carcass analyses for possible contaminant problems, and Bill Reichel and Nancy Coon published findings in 1969 and 1970 papers dealing with chemical residues in bald eagles. Concurrent with extensive necropsies that were conducted at Patuxent, mainly by Dr. Lou Locke, there was a major push to analyze contents of eggs. Patuxent scientists and contractors of Patuxent were also involved with measuring the thickness of bald eagle eggshells from many locations in the field and in museums. Results of these studies clearly showed that eggshell thickness had declined at an alarming rate leading to poor nest success and the resultant low population recruitment of young eagles. Another factor in the decline of some bald eagle populations (including the Chesapeake Bay population) was direct mortality from lethal concentrations of organo-chlorine pesticides, like dieldrin, endrin, and heptachlor epoxide, in the brains of eagles.

Many injured eagles from various parts of North America were soon arriving at Patuxent during the 1960-70s, and a major pen construction project was conducted to accommodate these birds. Although there was some interest to study captive eagles from



Patuxent scientist, Stan Wiemeyer, measuring the thickness of bald eagle eggshells with a micrometer, early 1970s.

a reproductive status with controlled diets with low levels of pesticides, this idea was soon abandoned due to the problem of getting enough eagles for statistically robust studies.

Male and female bald eagles are monomorphic (look alike) and therefore some pairings resulted in same-sex birds in the same pens. Although female eagles are typically slightly larger than males, Alaskan eagles of both sexes are much larger than ea-

gles from Florida of both sexes. This latitudinal gradient in size of a migratory species, resulted in great frustration among the biologists studying the eagles, whose origins were not always known. Later, sex was determined by laparotomy or past reproductive performance. Contaminant studies with pesticides proved to be much more successful with American kestrels and screech owls, which were easy to reproduce and handle in captivity.



Bald eagle pair in cage with nest on nesting platform and mirror overhead in 1970s.



Biologist, John Maestrelli, moving an eagle to a different pen, 1976.

The captive eagles were moved from the pens in the headquarters area to new eagle pens constructed in the endangered species area of the Central Tract in the mid-1970s. Here, with improved sexing techniques, the eagles were maintained, reproduced, and laid eggs on large nest platforms with sticks in the rough shape of a nest. A large mirror was installed over the nest so staff on the ground could easily see if eggs or young existed in the nest. Some nests had long ladders installed so rehabilitated eagles missing a wing could hop up to their platform nest. However, Dr. James Carpenter, Leader of the Endangered Species Propagation Program, reported that initially “few non-flighted pairs were successful in breeding and producing eggs.” Over the years, 83 eagles (either as chicks being fostered to wild nests in which pairs had produced eggs that were not hatching, or as young birds which were being gently hacked into the wild) were released into 13 states.”

The captive breeding program produced many eggs and eaglets, which were transferred to wild eagle nests throughout the country where nest success was poor. Placing human-



Bald eagle “Bomber” on his favorite stump at Patuxent, 1979.

reared eaglets in nests was more successful than replacing bad eggs with good eggs. Some adult eagles in the wild must have been surprised when they returned to their nest to find that their eggs were now eaglets!!! The eggs removed from nests were analyzed at Patuxent, and scientist, Stan Wiemeyer, found that DDE (DDT metabolite) residues declined substantially from 1969 to 1984. This was due mainly to the nationwide ban on the use of DDT in 1972.

One of the eagles at Patuxent during this period was the very charismatic male named “Bomber.” This eagle, obtained in the 1960s, apparently en-



Eaglet being hand-raised by researchers at Patuxent, 1970s.

joyed seeing humans, and on tours of the public (before visitor center construction) he received much admiration and photographs. Bomber played a role in educating the public about the plight of eagles and the problem with pesticides. Unfortunately, Bomber’s popularity and ease with humans was to lead to his demise.

In 1984, Patuxent received a request to provide an eagle for the opening ceremony of the Summer Olympics in Los Angeles, California. A licensed falconer, who had experience flying eagles from the hand, was hired for the job and Bomber was selected and received a flight to California. Falconers typically keep raptors hungry during training, so they return to the handler for food. This trainer, however, was too aggressive in trying to get the overweight Bomber in shape during the short time period before the opening show. No one knows exactly what went wrong with training, but the sad truth is that Bomber died in captivity before the opening of the Olympics.

The cooperation of all scientists and technicians at Patuxent in the Contaminant Program and the Endangered Species Program was the main reason that the eagle program was successful. Eventually the captive eagles in the colony were relocated to various zoos and other captive-breeding and environmental education facilities in the US, and the research studies ended. Eagle populations in the wild increased with the ban of DDT and the concurrent transplant program of clean eggs and nestlings in eagle nests in the wild ended. The contaminant data, which were accrued with extensive studies with eagles and many other avian species at Patuxent was the main reason for the ban on DDT. Although the loss of Bomber was an unfortunate and sad outcome for the eagle program, Patuxent can be proud of the overall positive results that greatly helped in the ban of persistent pesticides and the recovery of the bald eagle population. 🐅

Unique Voices and New Offerings

Article and photos by Karen E.H. Atwood, Patuxent Volunteer

Why were 76 beavers “sky-diving” in Idaho? How did a Great-Horned Owl smack herself into a moving freight train in Virginia and survive — and how did she prove she could thrive in the wild again? What flipped a baby Bald Eagle in a very tall tree in Wisconsin right out of the nest, dropping her ALL the way down to the ground, breaking a bone -- and who fixed it and restored her to her nest and her parents?



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Seeking other unusual items for diverse ages? Consider a notebook
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True “rescue-and-rehabilitation” stories like these can inspire our future scientists, conservationists and wildlife rehabilitators, as well as answer our questions and reveal more about the world around us!



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Optimizing Salt Marsh Management at Northeastern National Wildlife Refuges Through Use of Structured Decision Making

by Hilary Neckles, Research Ecologist, Patuxent Wildlife Research Center and Jim Lyons, Research Ecologist, Patuxent Wildlife Research Center

US Fish and Wildlife Service (FWS) National Wildlife Refuges protect extensive salt marshes along all US coastlines. Refuge management decisions to enhance and restore marsh integrity are often complicated by incomplete knowledge of ecosystem status and dynamics, potential tradeoffs among management goals, and realities of cost. We are partnering with FWS scientists and managers to help improve the quality of these complex decisions through use of structured decision making (SDM).

At its core, SDM is a systematic process to identify measurable management objectives and feasible management actions, predict the potential consequences of management actions relative to the management objectives, and select a course of action to maximize benefits while balancing tradeoffs. Previously, in collaboration with Patuxent Wildlife Research Center's (PWRC) Glenn Guntenspergen and others, we developed a regional SDM framework to optimize salt marsh management decisions on northeastern coastal refuges.

We are now applying this framework to develop tools for all 17 refuges or refuge complexes in the northeastern US (i.e. Maine through Virginia). This involved hosting workshops in which refuge biologists, refuge managers, and research scientists worked together to (1) identify potential management actions that might improve the ecological integrity of salt marsh units at each refuge, and (2) estimate the outcomes of each action on each

management objective, ranging from marsh flooding and salinity to abundances of marsh-obligate birds. We then predicted the total management benefit derived from each potential management action and identified the set of actions that would maximize refuge-wide benefits at different costs. The prototype for each refuge pro-

vides a tool for decision making that can be updated as new data and information become available.

For more information: <https://www.usgs.gov/centers/pwrc/science/use-structured-decision-making-optimize-salt-marsh-management-decisions>. 



Salt Marsh at Rachel Carson National Wildlife Refuge

2019 - A Year of Success for the Refuge's Plant Inventory Team and Herbarium

By Bill Harms, Refuge Plant Inventory Project Coordinator

2019 was a successful year for the Refuge Plant Inventory Project Team with the following accomplishments.

- **Imaging voucher specimens** - Marnie Whitlock and Elaine Nakash imaged plant specimens at the Norton-Brown Herbarium, University of Maryland. To date, we have imaged 4444 vouchers with 809 to go.
- **Specimen inventorying** - Elaine Nakash has been busy inventorying the plants in the herbarium cabinets. She has been busy placing the voucher sheets into new folders with species names printed on them. Among many things, her efforts will make sure that we know what specimens are in the cabinets and help to make it easier for researchers in the future to access the specimen sheets.
- **Repairing voucher specimens** - Christine McElroy has spent almost every Wednesday afternoon repairing voucher sheets. This will extend the longevity of the sheets.
- **New Plant Species Foraying** - Dave Anderson, Matt Beziat, Robert Ferraro, Chris Winton, and Bill Harms spent considerable time in the field. Newly found plant species include *Iris germanica* and *Botrychium matricariifolium*, *Spiraea tomentosa*, and *Persicaria densiflora*, among others. As of this writing, the herbarium has a total of 5253 vascular plant specimens from about 1260 species have been catalogued. Several other folks also joined us on our forays, and we hope they will continue to participate with us in the field.

- **Working with other institutes for plant determinations** - Thanks to imaging the vouchers and placing the images on the internet, it makes it easier for other researchers to examine the specimens held in the refuge's herbarium. This has already paid dividends with several researchers examining the specimens. Two researchers have reached out with questions about our vouchers. State Botanist Chris Frye at the Maryland DNR is helping to confirm the determinations of rare and threatened species.

Institutions with whom we have had contact over the past year include:

1. Beltsville Agricultural Research Center.
2. Claude E. Phillips Herbarium, Delaware State University.
3. Mid-Atlantic Herbaria Consortium.

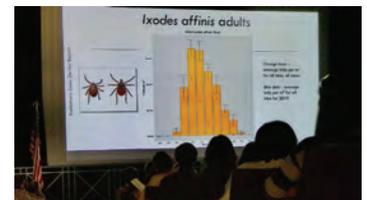
4. National Herbarium, Smithsonian Institution.
5. North American Network of Small Herbaria.
6. North Carolina Natural Heritage Program.
7. Norton-Brown Herbarium, University of Maryland.
8. SEINet Herbarium Network.
9. Tawes Herbarium, Maryland DNR, Annapolis, Maryland.
10. Towson State University Herbarium.
11. University of Florida Herbarium.
12. University of North Carolina at Chapel Hill Herbarium.
13. William & Lynda Steere Herbarium, New York Botanical Garden.

In 2020, we expect to complete most of the specimen imaging and collect many more interesting plant species. 🐾

Mid-Atlantic Tick Summit

by Ben Pagac, Entomologist with the Department of Defense/ Army at Fort Meade

The 9th Annual Mid-Atlantic Tick Summit took place on March 4th, 2020 at the Patuxent Research Refuge Visitor Center. More than 130 applied and research scientists from governmental and academic institutions shared the latest information regarding emerging tick-borne diseases, tick ecology, tick management, veterinary & wildlife impacts, and science communication. This meeting was spearheaded by the Center for Zoonotic and Vector-borne Diseases of the Maryland Department of Health, with supporting partners including the DoD and the USFWS. The goal of the Summit was to forge collaborative scientific relationships to reduce the human and animal health threat due to tick-borne disease.



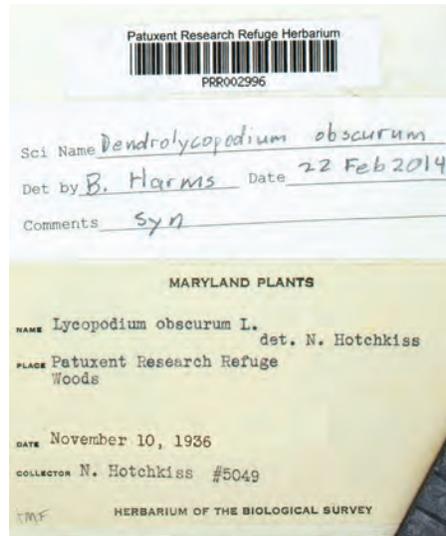
Which is Older - the Refuge or the Refuge's Herbarium?

by Bill Harms, Refuge Plant Inventory Project Coordinator

Here is a bit of trivia about the Refuge's Herbarium you may find to be interesting.

At a recent herbarium crew meeting, someone asked which specimen is the oldest in the herbarium's collection. Well, I looked it up and according to the database, it is a voucher of *Dendrolycopodium obscurum* (Flat-Branched Tree-Clubmoss) which was collected by Neil Hotchkiss on 10 November 1936. His collection number was 5049. The same day, Hotchkiss collected several other specimens, but this particular one has the lowest collection number, which would make it the first collection. Here is the link to this voucher; click on it to take a look <http://nansh.org/portal/collections/individual/index.php?ocid=16620957>

While other herbaria may have much older vouchers, Hotchkiss collected this voucher about five weeks before the Refuge was officially established



by President Franklin D. Roosevelt's executive order signed on 16 December 1936. So, this means the Refuge's Herbarium birth predates the Refuge's official establishment. This is not unlike the US Navy which has a birth date (13 October 1775) prior to our country's founding, (4 July 1776).



The answer to the question in the title is "the Refuge's Herbarium." Obviously, that makes our herbarium an integral part of the Refuge. 🐾

Article on Patuxent Research Refuge and Forest Inventory to Appear in New Nature-based Journal in Spain, "De Americana"

by Sandy Spencer, Refuge Biologist

When a forester from Spain's forest service assisted the refuge biologist with the forest inventory last year, little did we know the lasting impact the experience would have on him. He was so impressed with this big, diverse, full of life forest he wrote an article about the project, the refuge, and refuge system which affords us such places. "Much of Spain's forests are now gone", he once said, "we don't have anything like this left".

The article, in Spanish of course, will appear next month in a new, nature-based journal, De Americana (<http://deamerica.org/>), in Spain.



Left, co-author and volunteer Emilio Hererro assisting with Patuxent Forest Inventory; right, front page of De Americana featuring article on Patuxent.

Distinguished Scientists Who Worked at Patuxent

by Matthew C. Perry

Patuxent Research Refuge was created in 1936, and during the subsequent years Patuxent scientists have been associated with a variety of prestigious scientific organizations. The Wildlife Society has served as one of the most influential professional organizations associated with the scientists and the research conducted at Patuxent. Drs. Durward Allen and Joseph Linduska were researchers at Patuxent in the late 1930s and early 1940s, and both went on to serve as Presidents of The Wildlife Society. Dr. Allen also became a well-known professor at Purdue University and Dr. Linduska became the Deputy Director of the Fish and Wildlife Service. The Aldo Leopold Memorial Award is the prestigious award given by The Wildlife Society, and Drs. Durward Allen, Lucille Stickel, Joseph Linduska, David Mech, David Anderson, Kenneth Burnham, and James Nichols have been recipients. Dr. Stickel was the first of only two females to receive this award and she also served as Director of Patuxent Wildlife Research Center in the 1970s. Patuxent's biometrician, Dr. Kenneth Williams, became head of the F&W Cooperative Units and then CEO-Executive Director of The Wildlife Society after leaving Patuxent.

Many ornithological societies have had significant connections with

the migratory bird studies at Patuxent. Patuxent scientist, Dr. Richard Banks, was most closely associated with the American Ornithologists' Union (AOU) and the Wilson Ornithological Society, serving as president of both organizations. Drs.



Dr. James Nichols (right) receiving the very prestigious William Brewster Memorial Award from Dr. Steven Beissinger (left) at the annual American Ornithological Society Meeting in 2017.

John Aldridge and James Kushlan (a former director of Patuxent), also served as presidents of the AOU. Dr. Banks served as president of the American Association of Zoological Nomenclature and is well known internationally as past editor of seven editions of the taxonomic "bible" of common and scientific bird names, entitled "Checklist of North American Birds." The bird list is now published online by the American Ornithological Society (AOS) and Patuxent bi-

ologist Dr. Terry Chesser serves as senior editor.

The Elliott Coues Award from the AOS recognizes "outstanding and innovative contributions to ornithological research" and was awarded to Dr. Chandler Robbins. He is the only Patuxent scientist to receive this award and it is one of many awards he received in his long career. The William Brewster Memorial Award is given annually by the AOS to the author or co-authors of "an exceptional body of work on birds of the Western Hemisphere" and consists of a medal and honorarium. Dr. James Nichols is the only Patuxent scientist to receive this award.

Many Patuxent scientists have been involved with the Waterbird Society and two, Drs. James Kushlan and Michael Erwin served as president. They, along with Dr. Christine Custer, have also received

the Society's Distinguished Service Award.

When Patuxent Wildlife Research Center became part of the U.S. Geological Survey (USGS) in 1994, there was increased emphasis on studies dealing broadly with ecosystems. The Society of Wetland Scientists became closely associated with Patuxent and Drs. Donald Cahoon, Janet Keough, and Glenn Guntenspergen all served as presidents of this orga-



Dr. Jim Carpenter and fellow vet at new clinic, 2014.



Dr. Jim Carpenter with Sunset Zoo tiger, 2012.

nization. Several scientists at Patuxent have become directors of other research laboratories including, Drs. Susan Haseltine, Rey Stendell, Ronald Kirby, and Jay Hestbeck. Dr. Haseltine also was the Chief of the Biological Division of the USGS.

Other Patuxent scientists who have served in scientific society leadership roles include Dr. Hilary Neckles as president of the Coastal and Estuarine Research Federation and Center Veterinarian, Dr. Glenn Olsen, as president of the Association of Avian Veterinarians, an international group of avian researchers, practitioners, and academicians. A veterinarian at Patuxent during the 1970-80s, Dr. James Carpenter, received many awards while at Patuxent and has been past president of: the American Association of Zoo Veterinarians, the Association of Avian Veterinarians, and the American College of Zoological Medicine. Dr. Carpenter received further acclaim when in 2013 the Veterinary Health Center (Kansas State University College of Veterinary Medicine) named the new veterinary facility at Manhattan's Sunset Zoo the "James W. Carpenter Clinic at Sunset Zoo".

Many Patuxent scientists have been recognized as Elective members or Fellows of the AOU, AOS or other professional societies. Mr. Jerry Longcore stands out as a Fellow of

The Wildlife Society and Dr. James Nichols as a Fellow of the Ecological Society of America.

Several Patuxent scientists have been recognized for their accomplishments in the area of environmental contaminants. Dr. Lucille Stickel received the prestigious Rachel Carson award from the Society of Environmental Toxicology and Chemistry and Dr. Barnett Ratner served as president of this Society. Many scientists at Patuxent have received recognition for their accomplishments with the Department

of Interior's Distinguished Service Award. All the Patuxent personnel, who have received recognition for their scientific accomplishments or their leadership in the scientific societies have enhanced the stature of the important place Patuxent has played for more than 80 years of existence. None of the above accomplishments would have been possible without the dedication and expertise of a good support staff. All staff can be proud of these accomplishments and the role that we have played working as a team for the betterment of the global environment we all share and protect. 🐾



Group award for some support staff (l-r, John Sauer, Angela Greco, Bob Munro, Ginger Powell, Joyce Punch, Kinard Boone), 1989.

Around the Refuge

Photos by Matt Beziat



Snowdrop At North Tract



Mock Oyster Mushroom At North Tract



Deadly Galerina Mushroom At South Tract



Ice At North Tract



Asian Beauty Fungus At North Tract



Organ Pipe Mud Dauber Nest At North Tract



Bald Faced Hornet Nest At South Tract

Artists for Spring 2020 in the Hollingsworth Gallery

By Faith Leahy-Thielke, Patuxent Volunteer

Hollingsworth welcomes **Amanda Spaid** in April, the **Laurel Art Guild** in May and **Kimmary MacClean** in June. They will provide a delightful array of nature and wildlife images in a great variety of techniques. – including “digital painting.” This “emerging” art form allows artists to apply traditional painting techniques (watercolor, acrylic, oil, impasto, etc.) using a computer or a graphics tablet, stylus and software. The difference between a tablet and a computer here is only that an artist can draw on it directly.

Apparently, the digital painting technique gives April’s Amanda Spaid a “freedom and flexibility” she loves. It apparently allows the artist to achieve great detail and precision and the ability to adjust the images. Although she’s highly skilled in digital painting, Amanda describes her favorite medium as “colored pencils and other dry media” – on wood! She writes that “with wood there’s already a drawing in progress.” She selects and cuts wood panels for their grain which may already suggest rippling water, clouds, hair strands or simply provide a “warm glow” that serves as a shining background.

Amanda is a native of Maryland who earned degrees at the Montgomery College School of Art and Design, the Columbus School of Art and Design in Ohio, and the University of Maryland. Now a fine artist and illustrator in the DC metropolitan area – and new mother! (as of January) she writes “My hope is that my work inspires people to slow down, take a deep breath and appreciate the beauty of the natural world.”

In May, we’ll again welcome members of the Laurel Art Guild. Since 1967 this organization of professional and amateur artists has a home on the grounds of the historic Montpelier Mansion. It is under the jurisdiction of the Maryland National Park and Planning Commission which has been “instrumental in the Guild’s success” by promoting classes, workshops and shows. Membership is open to anyone with an interest in the visual arts. Activities available to members include: instructional and informational programs, a newsletter, local group exhibits (with an opportunity to sell), free display of work on Guild website, workshops with professionals, networking and social functions, and critiques by pros and peers. The Guild also promotes community involvement. For the past 30 years it has made scholarship fund donations to local high schools for graduating seniors who plan to continue their studies in the Fine Arts. The guild is supported by annual dues, sales commissions at shows and outside contributions. Check out members’ work on the guild website. Lovely on line but we’ll enjoy them more on the gallery wall.

June’s featured artist, Kimmary MacClean, comes from a family of artists, sculptors, musicians, dancers and choreographers! She is most of these and an author too. She writes that as a child she would spend hours “perfecting” her drawings or hiding in her room to paint. She has played piano, clarinet and oboe and although she began her college career in music, she graduated from the University of Maryland with BAs in both Art Studio – and Accounting! In addition, she holds a Maestro Enrico Cecchetti Advanced Ballet teaching certificate. Somehow, she manages to teach, dance, author books, and work in a variety of media which include charcoal, pencil, pastels, acrylic, digital and photography. She has exhibited artwork in numerous local shows including What’s Up Media, BWI airport, Anne Arundel Medical Center, Bowie City Hall, Annemarie Gardens, the House of Delegates. and many other galleries and venues. Her art specializes in nature and animals – some from Patuxent. All originals and reproductions are available for sale on line. Ah, spring. 🐾



Friends of Patuxent is now on Instagram!

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

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

Long Term Study of World's Southernmost Breeding Mammal, the Weddell Seal

by William A. Link, Ph.D., USGS Patuxent Wildlife Research Center

Weddell seals (*Leptonychotes weddellii*) of Erebus Bay, Antarctica, are the southernmost breeding population of mammals. The population is healthy, living in a pristine environment virtually free of anthropogenic impacts. Weddell seal moms haul out along the shores of Erebus Bay, and its islands. Having no natural predators out of the water, the seals are placid, and easily approached by researchers. The health of the population, the relative ease of marking animals, and the animals' faithfulness to their birth site make them an ideal model for study.



Weddell seal mother with pup

This population has been studied extensively since 1968, and the resulting dataset of detailed records for approximately 25,000 marked individuals has provided a rich source of information for evaluating fundamental questions of theoretical ecology. Patuxent scientists Jim Nichols and Bill Link have collaborated with Jay Rotella and colleagues at Montana State University for over a decade.

Some recent work has focused on the efficiency of mass transfer from mother to pup. It takes a LOT of energy to raise a Weddell seal pup. A typical pup weighs roughly 30 kilograms (66 pounds) at birth, and about 90 kilograms (200 pounds) when weaned 5



Mount Erebus, an active volcano, is in center and to the right is Big Razorback, an island about 5 miles off the coast of Antarctica. The oblong black blobs along the coast of the island are Weddell seals.

weeks later. The average mom weighs about 450 kg (1,000 pounds) at parturition, and loses about a third of her mass during lactation. Mathematical models developed by Link have been used to investigate the effect of maternal age and breeding history, as well as year effects and individual effects

on the efficiency of mass transfer from mom to pup via lactation.

Bill Link participated in field work in 2014 and 2018; his photos of the study area, the seals, and Emperor Penguins can be accessed at <https://www.flickr.com/photos/wal153/albums>.

A Walk on the SCIENCE Side

Courtesy of the Patuxent Phenology Walk Initiative Group

Wondering about the green-and-white numbered signs [photo] hanging in some of South Tract's Loop Trail trees, or on the Visitor Center patio and in the Pollinator Garden?

Each sign, a temporary marker, identifies the plant and reads, "Phenology Walk, Patuxent Research Refuge". The Walk will become a community-science opportunity for "Phenology," aka "observational biology". Phenology is the study of annual life-cycle changes in living organisms. Participants will observe these plants through the year, noting changes they see over time as well as any associated animals (e.g., caterpillars, butterflies, birds, bees). The data will contribute to climate studies through Nature's Notebook, a nation-wide Phenology project.



Unique Voices and New Offerings

Continued from page 6

processed by elephants; crosswords especially for birders; a bug stamp-set or a strikingly illustrated lift-the-flap book on insects; a creative or quirky shirt and cap. Endangered species origami, anyone? Crepe-paper butterflies? We've also added a new animal-and-bird first guides field-book series

for children, natural-history-related adult and children's games and puzzles, beautiful art pieces, jewelry, outdoor clothing and outdoor essentials. Come see us soon! Open 11 a.m. to 4 p.m. in conjunction with the refuge's National Wildlife Visitor Center days of operation (check website for the latest: <https://www.fws.gov/refuge/Patuxent/visit/directions.html>); both are closed on Federal holidays.



Warm weather brings “free bird-food” and sensory delights – bugs and butterflies! Try our new Bug Bingo game with family and friends. Intrigue a youngster in your life with this remarkable Lift-the-Flap Bugs & Butterflies book.

FRIENDS OF PATUXENT BOARD OF DIRECTORS 2019

- Richard Dolesh, *Chair*
- Lowell Adams, *Vice-chair*
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- Shannon Beliew, USGS Patuxent Wildlife Research Center, Liaison
- Douglas Meister, Esq., General Counsel

FRIEND OF PATUXENT BOARD MEETINGS

Friends Board meetings will be held at 5 PM at the Visitor Center. Dates for Board meetings for is calendar year are: January 21, February 18, March 17, April 21, May 19, June 16, July 21, August 18⁽¹⁾, September 15, October 20⁽²⁾, November 17, December – No meeting. Dates, location and times are subject to change. ⁽¹⁾ Strategic plan review ⁽²⁾ Board meeting and annual members meeting

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
- Corporate \$1,000 Gift: 1/4 page ad in the Friends newsletter for one year. (4 Issues).

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.





Friends of Patuxent

National Wildlife Visitor Center
10901 Scarlet Tanager Loop
Laurel MD, 20708-4011

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WE INVITE YOU TO JOIN!

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

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

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

(Application on reverse side)