

Carnivorous Plants | Sea Creatures | City Birding

NEW YORK STATE

Conservationist

APRIL 2015

Beautiful
Brookies





Dear Reader,

Growing up in New England, I was blessed to have the opportunity to enjoy many forms of outdoor recreation. My favorite was hiking in the woods not far from my home. I continue to enjoy the pastimes of my youth, but now I experience a bounty of New

York outdoor recreational experiences, from DEC's Five Rivers Environmental Education Center to the Adirondack and Catskill peaks. Collectively, these experiences led to a career working in environmental and land conservation.

Today, many youth don't spend as much time outdoors as my generation did. Distractions, like electronics, take a big bite out of their time, and organized youth sports, while great in their own right, leave less time to wade in streams, flip rocks, or explore a woodlot. And often, our communities are not connected to our natural environment in a way that makes them accessible.

People protect what they hold dear. Providing access to natural resources and places to enjoy them is a key element in this equation. If people have access to the natural world, particularly at an early age, they will learn to appreciate and enjoy it, and one day, to protect it.

That's why I am so excited about the progress we have made completing NY Works projects that provide better access for hunting, fishing and other forms of outdoor recreation. We've recently completed a host of projects across the state, from parking lots to trails, fishing platforms to hunting blinds. And thanks to our New York Fishing, Hunting and Wildlife app, it's easier than ever for younger and older people alike to get outdoor recreation information from the web.

At St. Francis Woodlands in Staten Island, we've built an Americans with Disabilities Act (ADA)-compliant path around Priory Pond to create fishing opportunities for those with mobility impairments. We've also completed ADA-compliant fishing platforms at Goodyear Lake in Otsego County, and on the Salmon River—famous for its world-class salmon fishery.

We're providing access to other forms of recreation as well. We've installed wildlife observation and hunting platforms at Three Rivers Wildlife Management Area in Onondaga County, and added a section of trail connecting the Long Path with the Appalachian Trail at Huckleberry Ridge State Forest in Orange County. And there are many more projects in the works.

Governor Cuomo recently announced additional funding for NY Works access projects that will make it easier than ever to find places to hike, fish, camp and hunt.

With so many new opportunities to enjoy New York's bounty, now is the perfect time for you, your kids, and their friends to get out and explore. Connecting children with nature, as early as possible, is the perfect way to ensure the next generation of environmental stewards.

Regards,
Commissioner Joe Martens

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Andrew M. Cuomo, Governor of New York State

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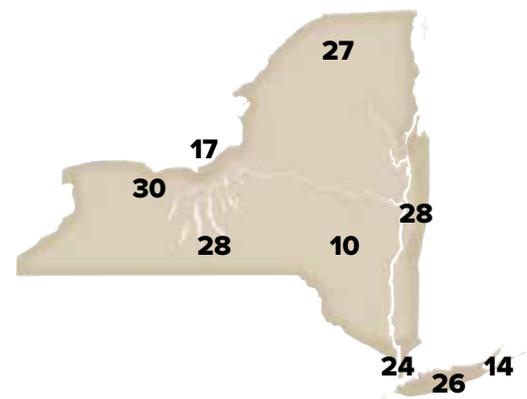
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Melissa Groo

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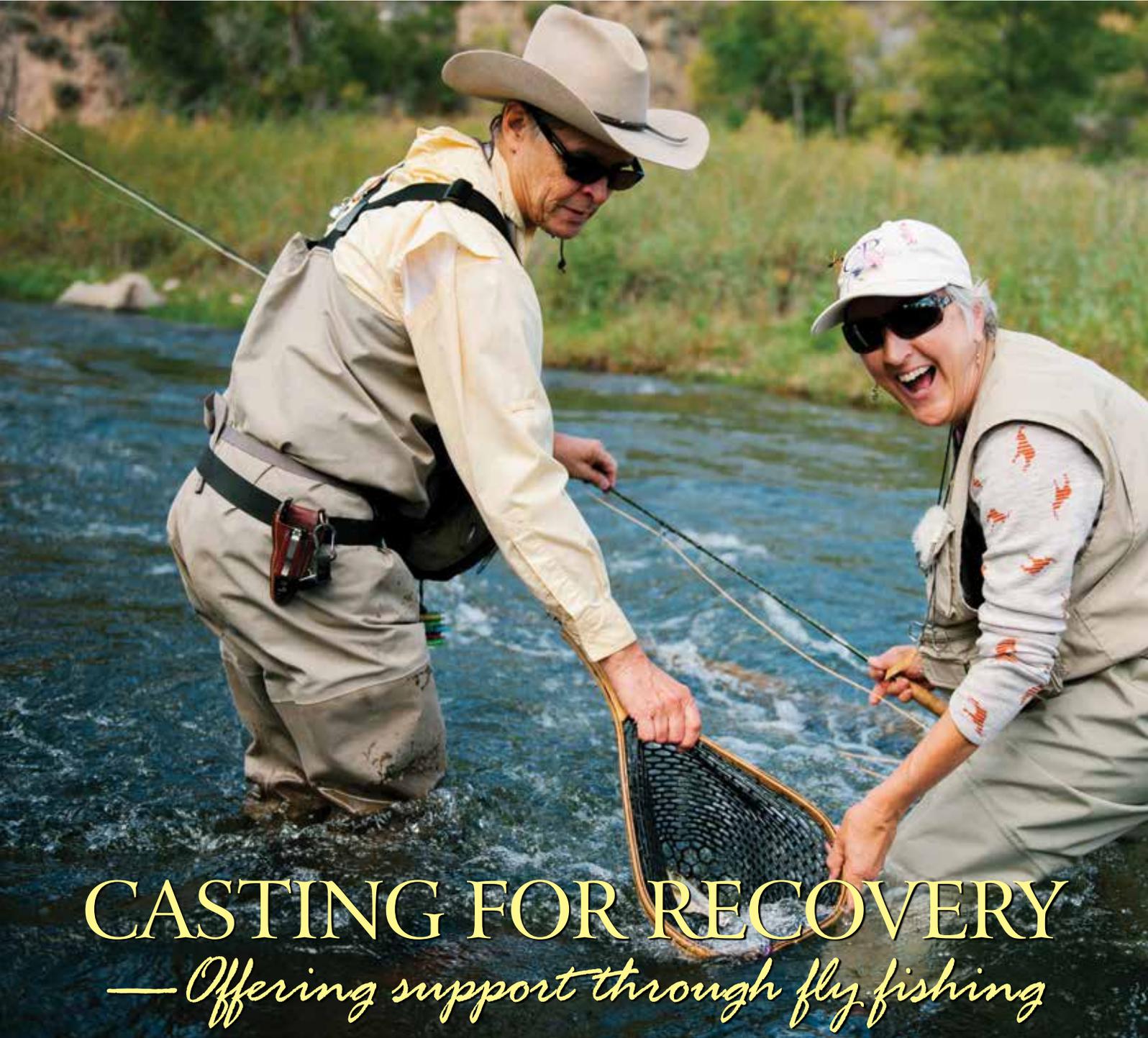
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Special Insert:
Conservationist
Kids!



By Peg Miskin

The joy was evident in the huge smiles on their faces. It was a beautiful day, and they were out on the water, learning to fly fish with a group of new friends who, until recently, were strangers. While everyone's story was different, they all shared a common thread: they were breast cancer survivors. And being outside that day, celebrating life, was what it was all about. No one even cared if they caught anything—it was the experience that mattered.

The women were there participating in a Casting for Recovery (CfR) retreat. Founded in 1996, CfR was the brainchild of a

breast cancer reconstructive surgeon and a professional fly fisher. The program's mission is to enhance the quality of life of women with breast cancer through a program that combines breast cancer education and peer support with the therapeutic sport of fly fishing. The retreats offer opportunities for women to find inspiration, discover renewed energy for life, and experience healing connections with other women and nature. CfR retreats are open to women survivors of all ages, in all stages of treatment and recovery, and are free to participants.



Casting for Recovery has received endorsements from medical and psychosocial experts for its innovative and unique healing model.

Why Fly Fishing?

On a physical level, the gentle, rhythmic motion of fly casting can be good therapy for the upper body as a way to encourage increased mobility in the arm for women who have had surgery or radiation as part of their breast cancer treatment. On an emotional level, participants are given the opportunity to experience a new activity in a safe environment amongst a supportive group of peers.

New York State Conservationist, April 2015

The retreats provide resources to help address quality of life issues after a breast cancer diagnosis, and a new outlet—fly fishing—as a reprieve from the everyday stresses and challenges of cancer. Participants are in all stages of cancer: newly diagnosed, advanced metastatic disease, several years past diagnosis, and cancer-free. It's this blend of participants that provides the opportunity for women to share their experience on all levels, regardless of where they are in the process. CfR works hard to accommodate women in any stage to ensure their experience is meaningful.

Successful Model

CfR retreats are offered in a unique setting, promoting survivorship and providing the opportunity to improve quality of life. Many women apply, and 14 applicants (plus an additional 20 alternates) are randomly selected to attend each retreat. There is no cost to those attending and all equipment and gear is provided.

The 2½-day retreat begins with a welcome gathering and introductory activities for participants and volunteer staff. The next day, participants are introduced to fly fishing through beginning and advanced casting sessions. Classes are led by trained volunteers and cover entomology, fly fishing equipment and knots. Trained medical and psychological facilitators lead discussions on the medical aspects of breast cancer, and the fears, concerns and overall psychological affects that breast cancer has on the women and their family, friends and co-workers.

On the last day of the retreat, volunteer “river helpers” from surrounding communities arrive to serve as personal guides for some one-on-one, catch-and-release fishing, assisted by CfR retreat fly-fishing instructors. River helpers need to be experienced fly fishers but not professional fly-fishing guides. This day allows the women to test their skills and gain an overall confidence in their abilities.

Casting for Recovery has received endorsements from medical and psychological experts for its innovative and unique healing model. To date, more than 6,800 women have participated in retreats nationwide, and more than 1,600 volunteers coordinate local programs. In 2014, CfR held 41 retreats across 37 states. Interestingly, 70% of the women attending a CfR retreat have not attended support groups, and 95% have never fly fished. Support for the national CfR program comes from firms as diverse as Sage, Sisters on the Fly, Orvis, Ashford

Cody Bell



Lori Romney



Casting for Recovery is more about the comradie and making new friends than it is about the catch. Although catching a fish (like this trout) is very nice.

Hospitality Trust, Cabela’s Outdoor Fund and Genentech, as well as support through individual donations and grants. Locally, volunteers raise funds to support their activities and retreats with help from local organizations, individuals, grants and public events.

One past participant said:

“I am sure you hear it a thousand times, but that was a very special weekend and I believe each person was deeply touched. You and your staff planned and created such a great environment, and the relationship of each person’s individual journey to traversing the river water while fishing was profound.”



Participants celebrating an uplifting retreat on Long Island.

New York Retreats

Since 2000, women from Metro New York City and Long Island have been attending sessions and practicing fly casting at beautiful Caleb Smith State Park and Preserve in Smithtown. With the help of dedicated volunteers, participants ended their retreat fishing in the world-renowned waters of the Connetquot River in Connetquot State Park and Preserve, Oakdale. This Long Island retreat is once again being offered and is scheduled for September 25-27, 2015 in Ronkonkoma. Breast cancer survivors from that area who are interested in applying may do so online at www.castingforrecovery.org. The application deadline is July 17, 2015. For more information on the event, including participating, volunteering or providing other support, you can contact the local Long Island Program Coordinator, Christina Galcia, at cfrlichristina@gmail.com or 631-252-7195.

As National Program Director, I am very proud of CfR's longstanding Long Island program. The majority of women who attend a CfR retreat have never picked up a fly rod and the opportunity to be in the moment that fly fishing provides, is very powerful. Giving these women the chance to think about something other than their breast cancer brings about amazing changes in their feelings about survivorship and quality of life. The volunteers get as much, or more, out of it as do the women attending.

Upstate New Yorkers will also have the chance to partake in a CfR program this year. A new retreat has just been scheduled for the weekend of October 16-18, 2015 at Tailwater Lodge on the Salmon River in Altmar. Women from all of upstate can also apply online. The application deadline is August 7, 2015. As with all CfR retreats, participants are randomly selected, and all gear and equipment is provided. Once

selected, a participant need only get to the retreat site. For more information, contact Program Coordinator Steve Olufsen at cfr.upstateny@gmail.com or 585-415-9970.

"We thank everyone who has helped make this event possible in Upstate New York including our sponsors, generous donors and volunteers," said Program Coordinator Steve Olufsen. "Their dedication to the CfR mission is sure to make the Upstate New York retreat a fun and memorable experience for 14 women who have dealt with breast cancer issues, past and present. Our team is looking forward to providing an enjoyable fly fishing and recovery experience that will help facilitate a weekend of strength and renewal in the womens' lives."

For more information on Casting for Recovery, visit www.castingforrecovery.org.

Peg Miskin is the national program director for Casting for Recovery.



Sundew plant with captured dragonfly.

Sundews, Butterworts and Bladderworts, Oh My! *—The carnivorous plants of New York*



By John L. Turner; Photos by Matthew M. Kaelin

If you've seen the popular movie or musical *Little Shop of Horrors*, you undoubtedly remember its central character, Audrey II, the florist shop's meat-eating plant. Somewhat reminiscent of a Venus flytrap, Audrey II consumes increasingly copious amounts of animal protein before ultimately meeting her demise.

While Audrey II is an exaggeration of a meat-eating plant, in reality she is only a modest one, since nature is replete with plant species that can do exactly what she does: consume animals. In fact, we have four major groups of carnivorous plants in New York State alone, including 19 species and one hybrid. These cousins of Audrey II are the pitcher plants (one species), sundews (three species and one

hybrid), bladderworts (14 species), and butterworts (one species).

Why have so many different groups of unrelated plants developed the carnivorous lifestyle? The answer is tied to the benefit of carnivorism. The majority of carnivorous plants grow in moist to wet habitats where basic nutrients—such as nitrogen, an element necessary for plant maintenance and growth—are very limited. Thus, the ability to obtain additional minerals and nutrients contained in the bodies of small animals allows these fascinating plants to effectively and efficiently supplement their nutrient uptake. This, in turn, enables them to inhabit and even prosper in marginal, nutrient-poor wetland environments such as fens and bogs.



sundew

Carnivorous plants employ a variety of different techniques to capture their prey, which largely consists of insects, arthropods and other small animals. Sundews and butterworts have what's known as flypaper/adhesive traps, while pitcher plants use pitfalls, and bladderworts, as their name suggests, use water-filled bladder traps.

There are two other techniques also used by carnivorous plants: snap traps and lobster-pot traps. Neither is used by New York species, however. The most famous snap-trap plant is the Venus flytrap. While house plant varieties can be purchased at a number of places, naturally occurring species of Venus flytraps are restricted to a small area in northeastern South Carolina and southeastern North Carolina.

Flypaper / Adhesive Traps

Sundews are the most numerous members of the flypaper group. Of the

seven species found in North America, three species grow in New York: the round-leaved (*Drosera rotundifolia*); narrow, or spatulate-leaved (*Drosera intermedia*); and thread-leaved sundews (*Drosera filiformis*). The genus *Drosera* in Latin means "dew of the sun." Also referred to as "Catch-Fly" by some, their name derives from the glistening dew-like glands at the end of tentacles projecting from the main stem. Sundews typically grow in acidic, sandy or peaty soil conditions along pond edges. Each sundew produces from several to more than a dozen, pretty, five-petaled purple flowers, which each blossom for no more than a day.

The dew is quite sticky ("mucilaginous") and the unfortunate insect that comes into contact with it is not likely to escape. Its chances for freedom decrease over time as adjacent stalked glands on the leaf blade remarkably respond by moving toward the prey and making

Sundew with captured insect.



contact with it. Charles Darwin was one of the first biologists to study this process in great detail. He found that it takes from three to twenty minutes for the adjacent tentacles to respond (sloth-like for an



sundew

bladderwort blossom



animal, but fast for a plant!). This is often followed by the leaf blade folding inward to increase the number of tentacles that can reach the entangled prey. Scientists aren't entirely sure how the leaf and the stalked glands respond so rapidly, but electrical discharges within the plant are thought to play a role.

Butterworts are another New York member of the flypaper group, for which we have one species, common butterwort (*Pinguicula vulgaris*). They get their name because they were believed to have magical powers, and farmers would rub the juice of the leaves onto the udders of milk cows whose milk was used to make butter. Sporting bright purple flowers, common butterworts are sometimes called bog-violets, however, they are not violets and have stalked, mucilaginous glands on their leaves, similar to sundews, though smaller. As with sundews, the gland stalks and the leaf margin itself can move to more extensively come into contact with captured prey. Other glands on the leaf surface release several types of digestive enzymes that make short work of prey.



pitcher plant



Pitfall Trap

The spectacular and unique pitcher plant (*Sarracenia purpurea*) is our sole representative species belonging to the pitfall trap family. Like all members employing the pitfall strategy, pitcher plants need an added ingredient: water. Unlucky prey drown in the water, and the plant secretes digestive enzymes into the water which accelerate the breakdown of the animal bodies and promote the release of minerals and nutrients.

But the ill-fated process begins farther up the plant, toward the opening, when an unsuspecting insect lands on the inside collar of the pitcher plant. Guided by downward pointing hairs, the insect works its way down the collar, which is populated by many nectar-secreting glands. Attracted to this area, the insect moves ever lower until it hits a surface like roof shingles that readily dislodge. The unlucky prey falls into the water and drowns, then it is dissolved and absorbed.



Bladder Trap

Bladderworts (*Utricularia spp.*)—the most numerous group of carnivorous plants in the world with more than 200 species, a dozen of which are found in New York—are marvelously adapted to a carnivorous lifestyle. They employ snap traps to capture their prey. Numerous small, round bladder traps are found in the stems (officially referred to as “stolons”) of this floating group of mostly aquatic species. The traps of bladderworts are generally regarded as the most advanced and sophisticated of any carnivorous plant.

A bladder that’s set for prey is flattened and contains a vacuum as the plant has pumped out all of the water from the bladder. In this state, the sides of the bladder are deformed and contain built up elastic energy. When prey trips the trigger hair near the bladder door, the sides of

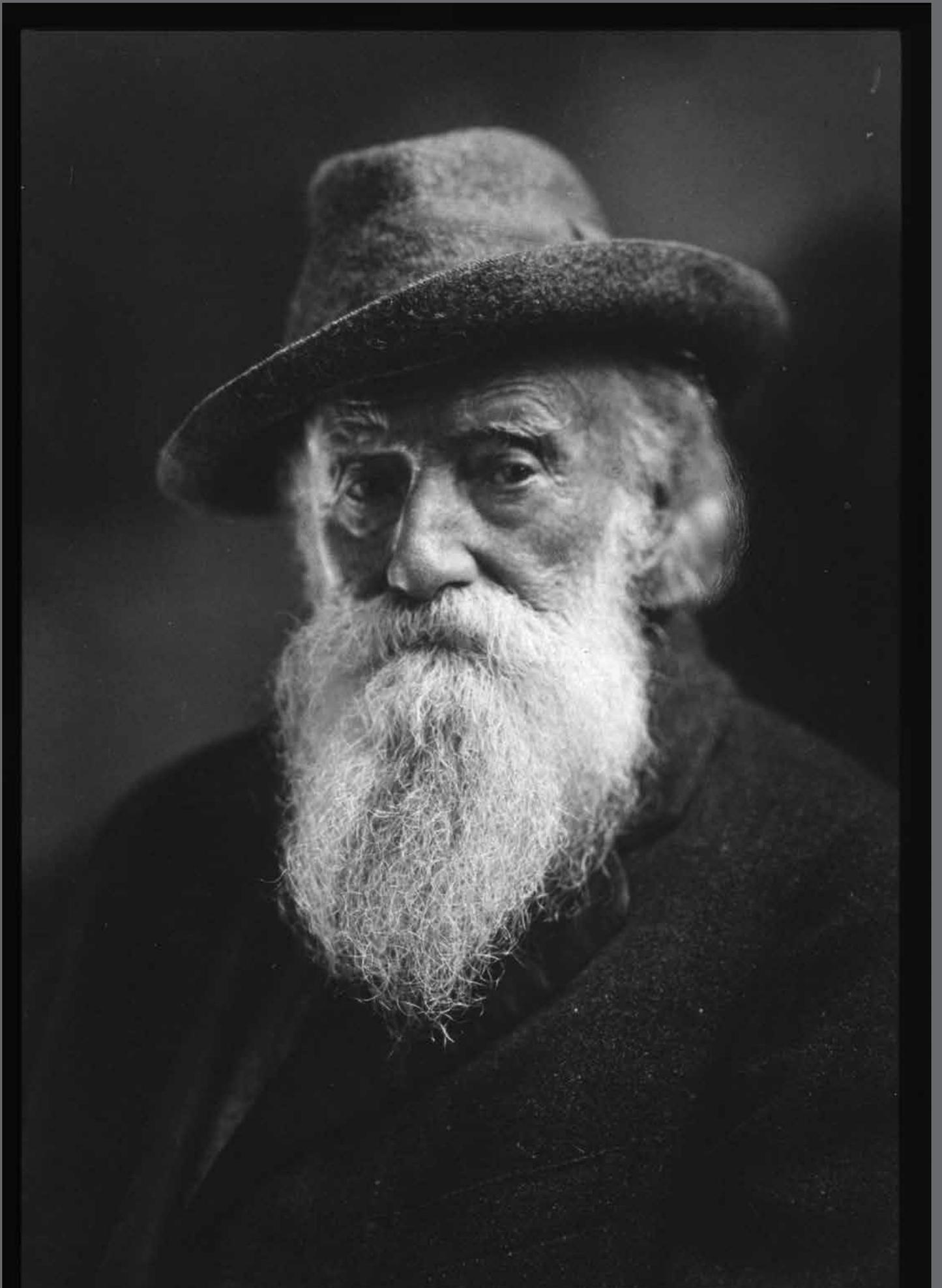
the bladder spring back to their normal shape, drawing the prey and surrounding water into the bladder. This happens in lightning-fast fashion, in as little as 1/50th of a second; the animal has no chance for escape. Almost immediately the plant releases enzymes to digest the trapped animal. The numerous forked hairs on the vegetative stems holding the bladders may play a role in guiding prey toward the bladders.

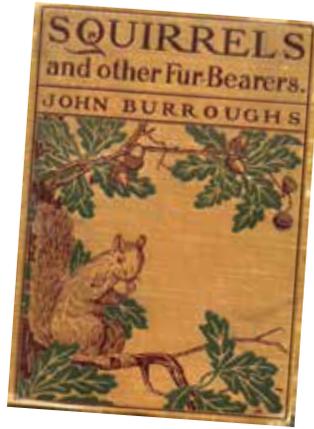
When you consider that carnivorous plants prey on insects, pollination can be a challenge. After all, a stuck insect—or a dead one for that matter—can’t be an agent for pollination. To address this concern, many carnivorous plants have tall flower stalks, thereby creating a significant separation between the flower and the lethal area of the plant. That way, an insect can pollinate the flowers without becoming lunch.

If you would like to experience carnivorous plants, you have two basic choices: see *Little Shop of Horrors*, or visit a local bog to view New York’s native carnivorous plants up close, in vibrant, living color. I think you’ll agree that the second option is the better bet. Just watch your fingers if you do.

Co-founder of the Long Island Pine Barrens Society, **John L. Turner** is the author of *Exploring the Other Island—A Seasonal Guide to Nature on Long Island*, and a frequent contributor to the *Conservationist*.

New York resident **Matthew M. Kaelin** has been photographing carnivorous plants for the past 12 years. His photos have appeared in several publications and is the focus of an upcoming book with Schiffer Publishing. Visit his website at www.mkaelin.com.





POWER OF THE PEN:

John Burroughs's construct, the nature essay, turns 150

By Craig Thompson

Photos courtesy of the Library of Congress

He was called the most photographed man of his time, a prolific writer who penned more than 300 nature essays and published 27 books over the course of 60 years. His charming vignettes were collected in grade school reading primers; many schools and nature clubs are named after him; and he has been immortalized in public sculptures, monuments and mountains throughout the U.S. Though he claimed that he “won’t preach one word,” his quaint sketches did much to lay the moral foundation for our nation’s budding conservation movement. And it all began 150 years ago with the publication of John Burroughs’s first nature essay “With The Birds” in the May 1865 issue of the *Atlantic Monthly*.

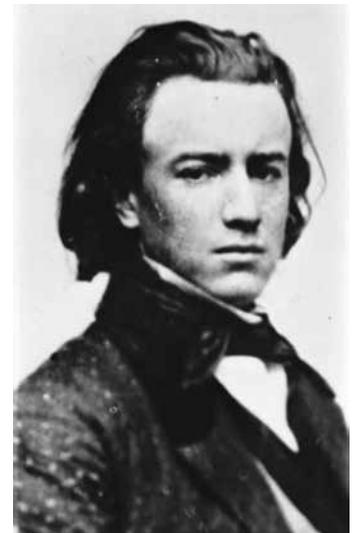
Burroughs was born on April 3, 1837 on a small farm in Roxbury. There were only 26 states in the Union. Thoreau was about to graduate from Harvard. The formal study of American natural science had just begun to emerge as an organized pursuit, New York having embarked on its first comprehensive state survey. The agrarian society innocently enjoyed the bounty of profligate nature’s seemingly inexhaustible supply of trees, fish and wildlife.

Burroughs struck out in his late teens to become a teacher, landing one-room schoolhouse jobs here and there in his surrounding Catskill Mountains. Enamored with Emerson, he tried his hand at philosophical writings, one of which, when published anonymously in the *Atlantic Monthly* in 1860, was widely presumed to have been written by Emerson himself. Burroughs was appalled to have appeared so derivative, but despite repeated rejections, kept honing his craft.

In 1863 Burroughs made his way to Washington D.C., landing a quiet clerical job with the U.S. Treasury Department, where he found time to invoke the muse. But Burroughs had difficulty finding his own voice until he met and befriended Walt Whitman, who encouraged Burroughs to write about what he loved and knew best: the wonders of nature just outside his door. Burroughs was among the first to call public attention to Whitman’s vibrant and sensuous poetic style, which began to inform his own technique. It was with this personalized and democratic approach to natural science that Burroughs began to establish the “nature essay,” a heretofore infrequent literary vehicle typically fraught with religious or moralistic underpinnings, as a legitimate genre.

Burroughs poetically wrapped factual natural history accounts with his own warm first-person observations, presenting the reader “the live bird itself,” not the transcendental “bird behind the bird” of Thoreau, or the “stuffed and labeled specimen” of cold science.

“The aim of the literary naturalist,” noted Burroughs, is to present “exact facts... possessed of some of the allurements and suggestiveness that they had in the fields and woods.”



A young John Burroughs, circa 1860



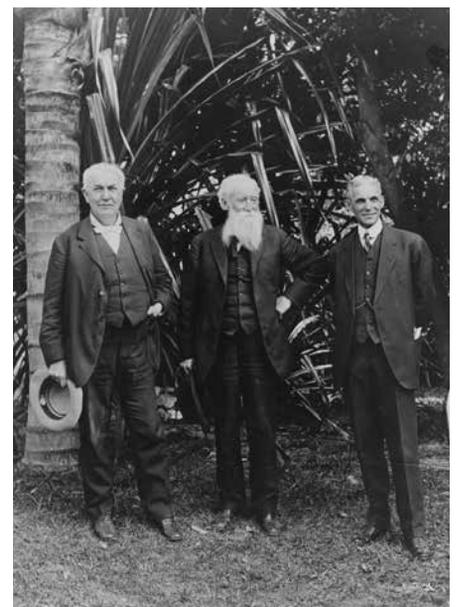
In 1895 Burroughs built Slabside, a rustic retreat in Ulster County that he used to escape from constant interruption of uninvited guests. The cabin sits in the 200-acre John Burroughs Nature Sanctuary, owned and maintained by the John Burroughs Association. The Sanctuary, a National Historic Landmark, is open year-round for quiet use and enjoyment.

The esteemed literary critic Henry James aptly described Burroughs's mindful invitation to actively engage with nature as "a prolonged rhapsody upon the pleasures within reach of any who will take the trouble to stretch his legs." Though Burroughs occasionally retreated, for better or worse, to themes of a more speculative nature, his truest gift, from his first nature book (*Wake-Robin*, 1871), to his last (*The Last Harvest*, 1922), was, and still is, to reacquaint us with what we had taken for granted.

By the time he published his fifth nature book, (*Pepacton*, 1881), Burroughs had attained wide public acclaim. So popular a national figure had he become that the movers and shakers of

the day were eager to associate with him, hoping to borrow some of the public's affection for themselves. Thus all those photographs. But Burroughs would not have been so popular had not the time been so right. Through his 83 years, Burroughs witnessed dramatic changes in the social, intellectual and economic fabric of America. The jarring philosophical upheaval wrought by Darwin's *Origin of Species* and the rise of analytic science cast a rationalistic pall upon the prevailing climate of opinion, and industrial expansion and its attendant urbanization lent a physical dimension to an increasing emotional detachment from nature.

But industrialization had also helped to create an educated middle class with



Burroughs with Thomas Edison (left) and Henry Ford (right) in Florida, in 1914.



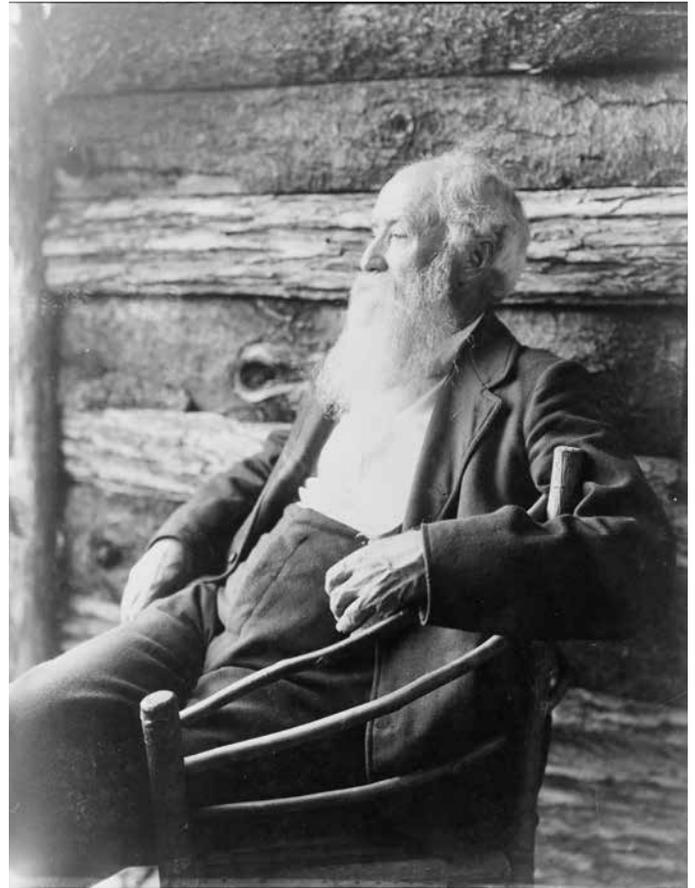
John Burroughs and John Muir (right) on the Muir Glacier in Alaska, in 1899.

enough leisure time, mobility and curiosity to explore the natural majesties of an expanding America, and motivation to express concern about them. Burroughs's "science that appeals to the heart and imagination" did much to build broad public awareness and appreciation of the natural world and support for its protection, which Thoreau and Emerson before him were not so favorably positioned to do. By the late 1880s, various conservation organizations leveraged this growing popular support to begin to move governmental bodies to action.

Yet it would be a mistake to portray Burroughs as a staunch environmental crusader. While firebrands like John Muir, George Bird Grinnell and Theodore Roosevelt were leading their respective Sierra Club, Audubon Society and Boone and Crockett Club battles, Burroughs contented himself with chronicling the courtship of bluebirds and the scent of wild hepatica. Insisting that "my aim is entirely artistic," Burroughs focused on reconnecting us with the simple rewards that can be freely found all around us. Besides, Burroughs had established close personal ties with many industrial magnates of the day like (boyhood friend and fellow Roxbury native) Jay Gould, Andrew Carnegie, Thomas Edison, Harvey Firestone and Henry Ford, and was too polite to step on toes.

To his credit, Burroughs, along with his good friend Theodore Roosevelt, helped found the New York State Audubon Society (an independent organization that later became Audubon International) in 1897, and lobbied in Washington in support of the seminal 1913 Weeks-McLean Act, one of the nation's earliest bird protection bills, passage of which had been dangling in the balance until Burroughs's friend Henry Ford dispatched one of his advertising agents to help win the day.

The great leap of faith to which all conservation advocates cling is that ordinary people will act to protect that which they



During Burroughs's last years, he penned some of his finest prose at Woodchuck Lodge in Roxbury. The lodge was built in 1860 by Burroughs's brother Curtis on the farm where they were both born and raised. Now a National Historic Landmark, the lodge is open to the public free of charge on the first weekend of each month from May to October.

have come to appreciate. Through the resonating power of his evocative writings, John Burroughs brought millions of Americans to a heightened awareness and understanding of our intimate bond with nature, helping to shape our attitudes toward the land at a critical time in our collective conscience. His plaintive call to find "perennial interest in the common universal things," as relevant and timeless today as ever, ultimately helped to change the face of the American landscape itself.

Craig D. Thompson retired from DEC in 2013 after 34 years of service as an environmental educator. In 1987 he was DEC's liaison to the John Burroughs Sesquicentennial Celebration. He remains active in the Audubon Society of the Capital Region.

For further reading, see previous *Conservationist* articles on Burroughs, including: "Slabides Centennial" in the April 1995 issue, and "John Burroughs: Philosopher, Poet, Literary Naturalist" in the February 1987 issue.

lined seahorse



bay scallop



UNDER THE SEA

—a photographic sampling of New York's marine life

By Chris Paparo

As a native Long Islander, I have been exploring the wilds of Long Island for more than 30 years. My passion for coastal ecology, and especially fishing, keeps me captivated with the area. Through my photography, writing and lecturing I am able to bring public awareness to the diverse aquatic life that calls the island home.

Here is just a small sampling of some of the many marine creatures you can find in New York's waters.

Lined Sea Horse

Probably one of the most fascinating fish found in New York waters is the lined seahorse. With its vertical orientation, long snout, armor-plated skin, and a grasping tail that looks more typical of a monkey than a fish, it is hard to believe that it is in fact a true fish. Even more intriguing is the manner in which it reproduces. The female seahorse transfers its eggs into the pouch of a male where he will then fertilize them. After a gestation period of about two weeks, the male can give birth to as many as 1,500 young.

Forbes Sea Star (see back cover)

Although commonly called starfish, sea stars are not fish. Rather, sea stars belong to a group of spiny-skinned animals known as echinoderms, which also includes sea urchins, sea cucumbers and sand dollars. Preferring to eat bivalves such as clams, mussels and oysters, a Forbes sea star has hundreds of suction-cup, tube feet that it wraps around its prey to pull it open. It then pushes its stomach through its mouth and into the shell of its prey, secreting digestive enzymes into the open shell. The prey is turned into a "soup" and is absorbed by the sea star's stomach until all that is left is the empty shell.

Bay Scallop

In addition to being a favorite among seafood lovers, the bay scallop is also the state shell of New York. Scallops have approximately 18 pairs of bright, beautiful blue eyes located along the margin of their shells. These eyes are capable of detecting the movements of potential predators. When threatened, scallops can "swim" to safety by clapping the two halves of its shell together. This clapping motion is created by the scallop's single, large abductor muscle. Unlike with other bivalves (clams, mussels, oysters), this muscle is usually the only part eaten by people; generally the rest of the scallop is discarded.

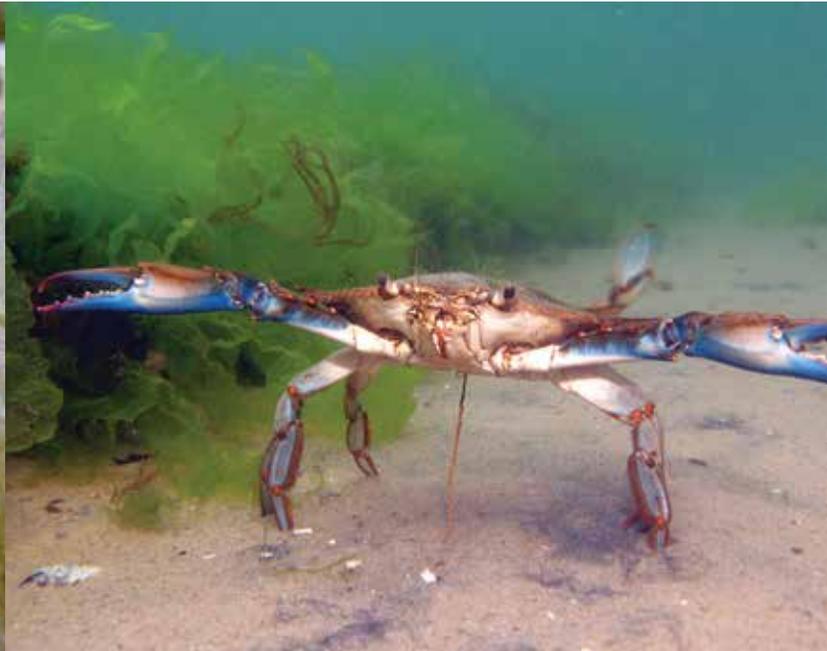
Northern Puffer

Also called a blowfish, the northern puffer gets its name from its unusual defense mechanism: when threatened, it will blow up like a balloon by pulling water into its stomach. While the puffer's increased size limits its mobility, it makes it difficult for a predator to consume it. Once the danger passes, the puffer quickly deflates, and goes about its business.

summer flounder (fluke)



blue crab



spotfin butterflyfish



Summer Flounder

One of the most popular marine game fish in New York is the summer flounder. Better known as fluke, they are found inshore during summer months, making them easily accessible to both the shore and boat angler alike. Similar to a chameleon, fluke are capable of changing their color in an instant to match their surroundings. As an ambush predator, this allows them to lie in wait for an unsuspecting baitfish to swim within reach of their large, toothy mouth.

Blue Crab

There is no better way to describe the blue crab than with its Latin name, *Callinectes sapidus*, which translates to “Beautiful savory swimmer.” These crabs are opportunistic scavengers and also aggressive predators. With powerful claws and paddle-like rear legs that are excellent for swimming, blue crabs are capable of feeding on clams, mussels, snails, worms, fish and even other crabs. The blue crab pictured here was even aggressive towards me, lunging at me several times before retreating to deeper water.

Spotfin Butterflyfish

Flowing north along the east coast of America, the Gulf Stream current brings warm ocean water from the tropics to our area, and with it, many tropical fish, including the spotfin butterflyfish. Arriving by early July, these tropical visitors find suitable habitat among the jetties and eel grass meadows along the south shore of Long Island. Many of these tropical fish thrive throughout the summer, only to perish once winter arrives, as they are incapable of migrating the great distance back to the tropics.

northern puffer



hermit crab



striped sea robin



northern star coral

Hermit Crab

Unlike other crabs, hermit crabs lack a hard shell to protect their abdomen. Instead, their body is soft and almost worm-like. To avoid predation, hermit crabs find empty snail shells to live in. Pictured is a flat-clawed hermit crab that has taken residence in the empty shell of a northern moon snail.

Striped Sea Robin

This local fish has many unique features. Large, round pectoral fins look more like the wings of a bird than fins of a fish. Modified pelvic fins that are finger-like in appearance are used to sift through the substrate to locate small fish, squid, crustaceans and bivalves to feed on. As these fish sift along the bottom, it appears that they are walking rather than swimming. Sea robins have large bony heads with spines along the gill covers that provide protection from predators. In addition, this fish can make a grunting sound, especially if caught while fishing.

Northern Star Coral

Although most people associate coral with tropical regions, New York is home to a species of coral known as the northern star coral. This species of coral does not grow into large branching structures typical of species found in the Caribbean; rather it encrusts hard substrates. A strict filter feeder, it prefers areas with good water flow. Strong currents bring plenty of food which the coral catches in its stinging tentacles.



Christopher Paparo is the manager of Stony Brook Southampton's Marine Sciences Center. He has a BS in marine biology, and is an avid outdoorsman who enjoys fishing, hunting and photography (check out Fish Guy Photos).

TO *the* MOON!

(and partway back)



Red knots in Brazil on their northbound migration to breed in the Arctic.

Edson Endrigo

A red knot's incredible journey

By Jeremy Taylor

Imagine flying the equivalent of the distance from the earth to the moon and partway back. Now imagine doing this if you weighed only four ounces! Sounds incredible, but this is exactly what one bird has done over the last two decades.

The red knot (*Calidris canutus*) has one of the longest migrations of any bird, travelling nearly 10,000 miles each spring and fall between its summer breeding range in the Arctic to the winter range in southern Chile and Argentina. This would be a feat for any bird, but for something with a wingspan of slightly more than 20 inches, it's nothing short of incredible! A perilous journey even once, this trip has successfully been made twice a year for at

least 21 years in a row by a male red knot, dubbed "Moonbird" due to the cumulative distance he has flown. In that time span, Moonbird—the oldest known of his species—has flown the equivalent distance of a trip to the moon and partway back.

First banded at two years of age in 1995 in Rio Grande, Tierra del Fuego, Argentina, Moonbird (also known as B95 for the number on the leg band he wears) has become a celebrity of sorts. Birders up and down the east coast from Long Island to Florida hope to be the one who spots him on his biannual migratory journey. The city of Rio Grande named him their "Natural Ambassador" and is planning a monument in his honor; a statue of Moonbird exists on

Delaware Bay (an important "refueling" stop for red knots) as well. Sighted along the Jersey Shore in late May of 2014 (check the sidebar on page 19 for where to see a video), Moonbird has become a poster-child for his species and the dangers they face on this incredible journey.

As are many species of birds, red knots are incredibly vulnerable to the impacts of climate change. Their arctic breeding grounds are warming, coastal habitats where they winter and feed are disappearing due to rising seas and an increase in violent storms, they face perilous journeys made even more dangerous by changing weather patterns, and their food is becoming harder and

harder to find in reliable quantity. Development of shoreline habitat and overharvesting of key food species also negatively affect red knot populations, which are in decline.

Migrating red knots feed heavily on the eggs of horseshoe crabs, with the Delaware Bay being one of the primary stopovers on the trip north to breed each spring. Flying 1,500 miles or more at a time, nonstop, these sites filled with abundant food supplies are critical to the birds' successful migrations. As the number of horseshoe crabs decline, so do the numbers of red knots. The importance of Delaware Bay to the red knot migration led to its designation in 1986 as the first site in the Western Hemisphere Shorebird Reserve Network.

Outside of the Delaware Bay area, the birds feed mainly on small clams and mussels; in 1995 scientists studying red knots discovered that roughly one-third of the eastern red knot population makes a stopover in the barrier islands off the Virginia coast. Other large stopover sites

Melissa Groo



Red knots' wintering plumage contrasts significantly with breeding plumage (previous page).

have been documented in the southeastern United States and along the western Gulf of Mexico.

In New York, red knots are listed as a Species of Greatest Conservation Need. In migration, they can be found along almost any large body of water with suitable shoreline habitat. The heaviest

concentrations can be found on the south shore of Long Island and in the Great Lakes region. Large gatherings of migratory shorebirds—including red knots—are observed feeding on horseshoe crab eggs each spring along the beaches of Sandy Hook Bay, Lower New York Bay and Jamaica Bay.

Why Knot?

What's in a name? There are two main theories about the origin of "knot." A commonly accepted explanation is that the bird is named after King Canute, or Cnut the Great, an ancient Norse king. Legend has it that Cnut was so proud that he believed he could even hold back the tide simply by commanding it not to rise. When the water rose anyway, he was forced to move his seat back up the beach. To some, the foraging behavior of knots along the tide line seemed emblematic of Cnut's attempt to control the incoming waters, thus the name. Another explanation suggests that the name is a representation of the grunting call note made by the birds.



Red Knot (*Calidris canutus rufa*) Migration Map



Courtesy of U.S. Fish and Wildlife Service

The population of red knots has always fluctuated, largely dependent on both healthy horseshoe crab populations and healthy beaches on which to feed and rest. During the 1990s, the harvest of horseshoe crabs (primarily used as a bait species and in medical research) skyrocketed, with dramatic negative impacts on the red knot population; it wasn't until the late 1990s that a plan was put into place to properly manage horseshoe crabs. The red knot population plummeted during the early 2000s; some estimates indicate a decline of as much as 75 to 90 percent.

Once numbering as many as 100,000 on Delaware Bay, the population declined in recent years to an estimated 12,000 (2003), although it has rebounded somewhat since then; current estimates place the population at around 30,000. Some scientists estimate that nearly 90 percent of the population can be seen at one time on Delaware Bay during the spring migration.

U.S. Fish and Wildlife Service / Greg Breese



Red knots feed heavily on horseshoe crab eggs.

In 2012, the Atlantic States Marine Fisheries Commission adopted a plan to link all future bait harvests of horseshoe crabs to meet red knot population recovery targets. Added to Canada's List of Species at Risk in 2012, red knots were officially proposed to be listed as a threatened species by the U.S. Fish and Wildlife Service (USFWS) in 2013. One of six subspecies of red knots worldwide and three found in North America, the *rufa* subspecies (of which Moonbird is one) received threatened status in December 2014. Although populations have stabilized somewhat according to the USFWS, they are certainly not at former levels.

Large "peep" shorebirds with rusty coloration in spring, red knots are one of the last shorebirds to arrive in the spring, hitting peak migration numbers in May in New York. So, the next time you are at the beach on a warm spring day and see a bunch of small shorebirds running along the water's edge, you could very well be seeing Moonbird or one of his compatriots taking a break along their incredible journey. Although perhaps not the most spectacular of creatures, a four-ounce bird that has spent the better part of its life flying annually from one end of the globe to the other and back is nothing short of miraculous, and rightly deserves that break along the shore.

Conservationist for Kids editor **Jeremy Taylor** grew up on a family farm in Greene County, and has spent most of his life surrounded by animals of one kind or another. He has been an avid birder since first being introduced to the hobby as a child by his maternal grandfather.

Editor's note: Moonbird was seen in Argentina in January! Watch for him this spring.

Want to learn more? The plight of red knots and their connection to horseshoe crabs has been documented in the PBS film *Crash, A Tale of Two Species*, part of the long-running series *Nature*. The story of Moonbird was also told in the 2012 book *Moonbird: a Year on the Wind with the Great Survivor B95* by Phillip Hoose. More information about the book and the work being done to conserve red knots and other shorebirds can be found at

<http://moonbirdfund.org/> A short video of Moonbird in NJ during late May 2014 can be viewed at <http://youtu.be/vpRU8gwqBOo>.

Additional information about the horseshoe crab in NY can be found on the DEC website at www.dec.ny.gov/animals/36195.html, as well as in the June 2011 issue of *Conservationist*, www.dec.ny.gov/pubs/74688.html.



The Eastern Brook Trout

By Robert Michelson

New York's official state fish, the eastern brook trout, is the smallest, and to many people, the most attractive trout occurring in the state. It has a dark green background with wavy light-colored markings, and a smattering of red dots, surrounded by blue halos along its sides. Its lower fins are red with bright white edging and a distinct black line.

Also called speckled trout, "brookies" require cool, clean water. Adult fish spend their lives in cold, small- to moderate-

sized streams, ponds and lakes. In New York, they are popular game fish and can weigh six pounds, although most average less than two pounds.

In 2009, I was fortunate enough to witness and photograph spawning brook trout. I laid in the 42°F stream for about four hours, capturing image after image. While my body protested the cold, forcing me to periodically get out of the water to warm up, the result was well worth the effort.

During the spawning season, male brook trout (left) develop an upward hook on the lower jaw (called a kype). Males use this kype to get the attention of females (right) and to intimidate competing males. Spawning male brookies are especially colorful with bright red on the bottom half of their bodies. Female brook trout have thinner, cucumber-shaped bodies and are generally less colorful than males.



Brook trout spawn in the fall (generally mid-October through early December). Females dig shallow nests (called redds) on gravel beds in spring-fed streams. Using their tails, they fan the gravel to create a shallow depression in the streambed, and then lay their eggs in the newly created nests. Nearby adult males quickly fertilize the eggs. The females continue to expand the original redds, or create new ones slightly upstream. The loosened gravel moves downstream and covers the fertilized eggs. When spawning is complete, the adult fish move on, leaving the eggs and young to develop on their own.



A pair of spawning brookies.



Approximately the size of a small pencil eraser, and slightly yellow in color, newly fertilized brook trout eggs develop safely just below the surface of the gravel where they are buried. To survive, they need cool, fast-moving, oxygen-rich water. Eggs hatch in 1 to 4 ½ months, depending on the water temperature. The colder the water, the longer it takes for the eggs to hatch.

As the eggs mature, the eyes and spine of the developing brook trout can be seen through the clear shell. This stage of the fish is called a sac fry. In this photo you can see a newly hatched sac fry with its attached yoke-sac, and an “eyed-out” egg ready to hatch below this fish. These eyed eggs hatch into sac fry or alevin in another 45-60 days, depending on water temperatures. The sac fry develop and grow for an additional 6 to 8 weeks in the redds, drawing nutrients from their yolk sacs.



In early to mid spring, as stream temperatures rise, sac fry hatch and emerge as fry from the redd. Growing fry develop dark vertical bars on their sides called parr marks, which provide camouflage for the young trout. This stage of development is called the parr stage.



(brown trout parr on left, brook trout parr on right)

Brook trout may feed up to three years before they become mature adults and are able to spawn. Brook trout parr are similar in appearance to brown trout, but can be told apart from their cousin by the white markings on the front edge of

each fin of the brook trout. In addition, brook trout have vertical black parr marks, as well as wavy, worm-like markings on their backs. Brown trout have brown spots along their sides, and lack the parr markings.



To learn more about brook trout, visit DEC's website.

Robert Michelson has been a professional photographer/videographer for more than 30 years. A certified SCUBA diver, he specializes in underwater photography and videography. Visit his website at www.pbmphoto.com.



CITY LIFE IS FOR THE BIRDS

—bird watching in... *New York City?*

By Tristan Lowery

It was birds, of all things, that first stoked my interest in cities. I lived in New York City for many years after college, and like most New Yorkers, always found myself too busy to give much thought to the origins and workings of the tremendous manmade environment around me. After a time, however, I came to miss the childhood encounters with wildlife I had growing up on the rural east end of Long Island—experiences I thought I’d long since abandoned for a life in the city. But in the end, strangely, it was the city that became the setting that rekindled my interest in the natural world.

Unless you’re looking for it, wildlife can be difficult to find in New York City. The idea that there was any room for it in that awesome expanse of concrete and

steel seemed farfetched to me at the time. Given my expectations, it’s ironic that my introduction to urban wildlife came courtesy of a New York City subway map when, during one of my rides, I noticed Jamaica Bay Wildlife Refuge (on the edge of the map, down near the Atlantic coast of Queens), a place I now appreciate as one of the premier birding locations in North America.

Anxious to see what wildlife this promisingly named place might offer, I made my first visit on an early summer morning (by subway, no less) and wandered around the West Pond Trail. The first thing that struck me was the habitat: I’d long come to expect sandy beaches wherever New York State met the sea, but Jamaica Bay was verdant

Jeff Nadler



glossy ibis



golden-winged warbler

and marshy, almost antediluvian. As I glimpsed through the reeds into the teeming/marshy wetlands beyond, a strange, dark bird with a purplish iridescence and a long, curved bill caught my attention. Outside of the tropical birds kept at the Bronx Zoo aviary, I'd never seen anything like it. To me, this strange creature would have seemed out of place anywhere but at an equatorial waterhole teeming with wildlife. Yet here it was in Queens—in New York City—calmly feeding among the tussocks of saltmarsh grass as 767s from JFK roared overhead.

After thumbing through my Peterson field guide, I identified the bird as a glossy ibis. In spite of the exotic appearance of this odd-looking bird, the range map in the guide indicated nothing amiss in its presence here in the forsaken outskirts of Queens. I checked the map again, just to make sure. It seemed that the glossy ibis—at least for part of the year—was just as much a New Yorker as I was.

Throughout the year, I made many more visits to Jamaica Bay, eagerly adding to my budding bird “life list” as I explored the refuge and discovered the surprising turnover of species the seasons brought. There were so many birds that



New York City has some great areas for bird watching.

it was difficult at times to keep up with them all. Even more puzzling than sorting out the various species of shorebirds were the questions my visits raised about the very existence of Jamaica Bay itself. How did this extraordinary place ever survive the inexorable onslaught of the development that now surrounded it on nearly every side? What would its future be, in this decidedly urban, and still growing, landscape? And most importantly, what were birds still doing in such a place?

I continued birding around New York City, eventually making my way into Central Park, undoubtedly the most famous urban park in America. Nestled within the skyscrapers of Manhattan, it was there that I first heard the famous “dawn chorus” of songbirds and discovered how urban parks become “migrant traps” to weary birds on the move, offering a hospitable patch of greenery among the seemingly limitless stretches of glass and asphalt. I became familiar with a bewilderingly colorful procession of warblers, vireos, orioles, flycatchers, tanagers and thrushes whose arrival I've since come to expect every spring like clockwork. Even in a city as big and uninviting to wildlife as New

York, the birds are there, if you know when and where to look for them.

In time, birds became emblematic for me of the relationship between cities and the natural world. Learning about birds in a city forced me to think about their place in our urbanizing landscapes and our very serious responsibility to protect them, both outside our doorsteps and beyond. I began to understand the importance of urban green spaces and responsible land use in preserving wildlife, even within the densest human settlements. For all their picturesque charm, the fabricated fields and woodlands of Central Park taught me the importance of managed landscapes.

The entire experience of birding in New York City quickly became a lesson in both urban ecology and in planning cities to benefit both people and wildlife. If nothing else, birding in a city like New York brings one face-to-face with the implications of climate change, development, and habitat loss on an accelerated scale; perhaps, I think, far less obvious “out in the country.” But at the same time, cities are offering solutions—sometimes unintentionally—to the often uneasy relationship between our developing world and the spaces we set aside for wildlife. Cities that grow higher



wood thrush

and more densely are now recognized as the most resourceful and least environmentally destructive forms of development we can build, preventing urban sprawl and preserving valuable habitat where it still exists.

Even taking the A train to Jamaica Bay was a defining act as an urban birder: my energy-efficient use of public transportation was both affordable and environmentally-friendly, and yet it was the remarkable urban infrastructure of the subway system that allowed me access to a wildlife refuge within America's most urban National Park.

As I discovered, birds (and other wildlife) have made their homes in our manmade environments, eking out their living in unwelcoming settings with astonishing resilience. Urban birds allow city

dwellers to experience nature without the inconvenience and costs of travel, and their presence in city parks, gardens and backyards can enhance quality of life and community desirability. Simple acts like bird feeding and nest box construction can instill in people a sense of stewardship about the wildlife in their own backyards, fostering greater local involvement and personal responsibility for our communities in general.

Cities are, of course, designed by and for people. But as I discovered—almost by accident—we've been building them for birds all along as well. Ever since I saw that glossy ibis, I've continued to watch and listen to birds in the cities I've lived in and visited.

I encourage everyone interested in birding to explore, as I did, the amazing wealth of bird life found in places like Central Park and Jamaica Bay. I think they'll be surprised by the tremendous variety of species that inhabit our city landscapes, and quickly discover just how accessible and rewarding urban bird watching can be.

An avid birder, **Tristan Lowery** is an intern with DEC's Hudson River Valley Greenway in Albany.

On Patrol

Carl Heilman II

Real stories from Conservation Officers and Forest Rangers in the field

Contributed by ECO Lt. Liza Bobseine and Forest Ranger Capt. Stephen Scherry



Peregrine Falcon Rescued— Westchester County

ECO Tom Koepf received a call from wildlife photographer Kerri Voges about a juvenile peregrine falcon stranded on the shore of the Kensico Reservoir in the Town of North Castle, Westchester County. It had fallen or leapt from its nest under a bridge that crosses the reservoir and landed on the shore. Because the young bird could not yet fly, it was vulnerable to predation. With help from Voges, Officer Koepf captured and transported the falcon to a licensed wildlife rehabilitator, who will rehabilitate and release it back into the wild.

Hiker Lost in Wintry Wilderness— Essex County

At 6:30 p.m. one winter day, Ray Brook Dispatch received a call about a hiker who had lost the trail on Pitchoff Mountain. Leaving the north summit, the 56-year-old male lost the trail due to deep, unbroken and windblown snow. After obtaining coordinates, Forest Rangers Kevin Burns, Chris Kostoss, Rob Mecus, Rob Prackajlo, David Russell and Scott VanLaer responded. Because of the snow pack and temperatures at or

below zero at higher elevations, they were able to travel only one-half mile per hour. At 11:15 p.m., rangers located the hiker and escorted him back to the trailhead. By 1:25 a.m., everyone had exited the woods.

Bad Shellfish—Kings County

ECOs Jeffery Krueger, Paul Pasciak and other DEC staff conducted a shellfish inspection in Brooklyn's Chinatown in Sunset Park. The officers checked markets for illegal shellfish that could threaten the health of consumers. They discovered frozen blocks of freshwater clams and a seafood mix containing uncooked clams from China, which is not a FDA-certified importer. Officers Krueger and Pasciak issued a warning and took samples to be tested for bacteria. At another market, they found a forged copy of a shellfish tag and issued a summons. All suspected shellfish products were destroyed.

Tipsy Angler Charged with Illegal Tip-Ups— St. Lawrence County

ECO Scott Atwood was conducting fishing checks just before dark on Horseshoe Lake in the Town of Piercefield when he saw a group of anglers on the lake. They went back to their camp, leaving several tip-ups unattended. Officer Atwood heard a pickup heading his way and signaled for the driver to stop. From the man's slurred speech and alcohol on his breath, the ECO realized the driver was intoxicated. Officer Atwood told the man to exit the vehicle, but when a passenger in the truck distracted the ECO, the driver began to run away. The officer quickly caught and arrested him. Officer Atwood and a trooper then returned to the lake to check on the tip-ups. Eight had been left unattended, and five were not marked with a name or address. The officer issued tickets to another man and to the truck driver, who was charged with driving while intoxicated, refusing a breath test, resisting arrest, and operating unattended tip-ups. The case is pending in Piercefield Town Court.

Ask the ECO

Q: Spring Turkey Season runs from May 1-31. What rules should I know about turkey hunting?

A: There are several things you should remember about hunting turkeys in the spring: Only bearded turkeys may be taken; legal hunting hours are ½-hour before sunrise until noon; only one bird per day may be taken, for a total of two birds for the entire season; and it is illegal to use bait or electronic calls to hunt turkeys. Any suspected violations should be reported to DEC's Law Enforcement Dispatch at 1-844-DEC-ECOS.



Studying Steelhead

DEC recently discovered a thiamine (vitamin B) deficiency in adult steelhead returning from Lake Ontario to the Salmon River in Oswego County. In mid-November 2014, DEC staff first began receiving reports of erratic behavior and dead and dying fish. Steelhead samples sent to the Cornell University Aquatic Animal Health Program and the U.S. Geological Survey's Northern Appalachian Research Laboratory indicated a severe thiamine deficiency, which can impact egg quality, survival of eggs and newly hatched fish, and survival of adult fish in extreme cases. DEC is taking steps to meet its spring 2015 steelhead egg-take targets. Staff from DEC's Rome Fish Disease Control Unit and Salmon River Hatchery are preemptively injecting adult steelhead returning to the hatchery with thiamine. Treated fish will be held in outdoor raceways and fed a diet fortified with vitamin B. Staff will continue to monitor the fish and work with experts to further understand last year's steelhead mortality.

Beach Makeover

DEC announced a \$6.3 million Lake George Beach Improvement Project to help improve water quality and increase recreation. A boat launch and a parking area for 26 trailers will be built on the east side of Lake George Beach, providing needed distance from the bathing area and local residences. A repaved



parking lot will be made with porous asphalt, which will protect water quality along the shoreline. Additional improvements include safer walkways, a new multiuse path for bikers and walkers, and easier and safer access for people with disabilities. The beach and boat launch are expected to open by Memorial Day.

purple loosestrife



John D. Byrd

Help Fight Invasives

Become part of New York’s invasive species early detection network by learning how to use iMapInvasives, an online mapping system shared by citizen scientists, educators and natural resource professionals. Anyone interested is encouraged to help keep the map up-to-date and accurate by reporting invasive species locations and control efforts. Training is required to enter data, and the NY Natural Heritage Program will offer free, beginner and advanced level sessions throughout the state this spring. Visit www.nyimainvasives.org for schedule details and registration, and contact imapinvasives@nynhp.org with general questions.



Take a Hike

DEC’s Hiking and Trail Information webpages contain valuable information on Adirondack and Catskill trails to benefit both novice and experienced hikers. Regularly updated, the pages include trail closures and other notices, as well as helpful tips and reminders. Some trail information is general; an area’s local forest ranger is the best source for current and specific updates. Visit the “Hiking” page on DEC’s website and then click the corresponding Adirondack or Catskill trail information webpage. By signing up through GovDelivery, you can receive email bulletins of trail conditions. Visit DEC’s Email and Social Media Accounts web page (search “GovDelivery”) for more details.



Homage to DuPont

The *Conservationist* family was saddened to hear that the magazine’s longest-serving editor, John DuPont, passed away in January at age 84. Remembered by friends and colleagues as a scrupulous grammarian and softspoken wordsmith, John became Assistant Editor in late 1974 and served as Editor from 1977-1992.

Born and raised in Wisconsin, John’s English degrees served him well, as an English teacher at Columbia High School (Rensselaer County), exhibit writer at the State Museum, and an editor at DEC. Ever humble, in his departing essay, John credited the *Conservationist*’s “... family of readers whose continuing interest, intelligence, knowledge and dedication to the environment are the main reasons for the magazine’s continuing success.”

Perhaps the best appraisal of John DuPont’s work can be found within the pages of the magazine published under his leadership.

—The Editor



Future ECO

This past fall, our son, Thomas, met Environmental Conservation Officer A.J. Glorioso. After learning about the work that ECOs do, my son was convinced he would one day be an ECO. Thomas asked if he could dress up as an ECO for Halloween and Officer Glorioso didn't hesitate to help us make Thomas's costume just right. He even took pictures with Thomas on Halloween. Since then, Officer Glorioso has gone out of his way to send Thomas information on environmental conservation in New York, and a Jr. badge. Thomas has since been studying animals that hibernate, tracking animals in the backyard, and discovering ways to conserve the environment!

Megan and Felix Donnelly
Preston Hollow, Albany County

It looks like you have a future conservation officer on your hands! ECOs are sworn police officers dedicated to protecting the state's natural resources and environment. To become an ECO, individuals must pass a written examination as well as attend a rigorous 26-week residential training program. For more information, visit DEC's website.

More Snowvember

We heard from several people about our feature, "Snowvember: The Storm that Rocked Western New York" in our February issue. Many people had even more photos to share with us, so we put the additional photos in a special Snowvember album on our Facebook page. Visit us on Facebook to take a look.

Catching Trout

My nine-year-old granddaughter Julia caught this trout at our camp in the Adirondacks. She lives in Miami, FL, and gets to spend time here in the summer, which she just loves. She loves the outdoors and enjoys the magazine!

Michael Belmont



That's an impressive catch. You both should be proud! Fishing is a great family friendly activity and New York is ripe with places to test the waters. For tips, ideas and where to visit, check out DEC's fishing webpages.

Snack Time

While kayaking on Canadice Lake, I was treated to an osprey engaging in an afternoon hunting session. The osprey ultimately snagged a bullhead from the west side of the lake.

Brian Shaw
Rochester, Monroe County

It looks like you were in the right place at the right time.



Greedy Raccoon

Here's a raccoon who raids our birdfeeder. It seems once these raccoons discover food, it becomes a game. We remove the corn before nightfall, but the next day the raccoons come earlier as a result!

Joanne Graham
Genesee County



Handsome Bluebird

I recently had the pleasure of photographing a pair of Eastern bluebirds. The birds were attracted to the mirror of my car, so here is a photo with that unique interaction.

Everet D. Regal
Phoenix, Oswego County

Great shot! It looks like this bluebird likes what he sees, but he's actually defending his territory against what he thinks is a competing male!



Fishers and Porcupines

Retired DEC furbearer biologist Gary Will of Hamilton contacted us about our December article on fishers. Gary didn't agree that fishers are putting a serious dent in the porcupine population. Point taken, but Gary agrees with us that fishers are one of the few animals that will prey on porcupines. Gary also said that the article gives the impression that fishers need a great deal of forest cover, but he asserts (and we agree) that fishers are also found in areas that are a mosaic of habitat types.

Ask the Biologist

Q: I caught (and released) this largemouth bass in an Adirondack wilderness pond. The fish had slash marks on its body and was missing part of its dorsal fin. It appeared to be acting fine. What could have made these wounds?

Matt Pavlick, Lancaster



A: While it's impossible to know for sure, based on the photo it looks like this bass may have escaped becoming lunch to an osprey. Like eagles, osprey have the ability to grab larger fish in their talons and then carry them off to eat (see opposite page). The two parallel slashes on the one side appear to be the correct spacing of osprey talons; an eagle would have left three marks. According to Cornell Lab of Ornithology's website, osprey success rates range from 25% to 70%, so it's not hard to envision some wounded fish out there as a result of near misses. Fish can recover from some amazing wounds—like this one appears to be doing.
—Jonathan Fieroh, DEC Aquatic Biologist

Contact us!

E-mail us at: magazine@dec.ny.gov

Write to us at: Conservationist Letters, NYSDEC, 625 Broadway
Albany, NY 12233-4502

facebook.com/NYSDECtheconservationist

Back Trails

Perspectives on People and Nature

John Bulmer

Sundays with Grandpa by Tom Clark

My grandfather was an interesting man: a skilled woodworker who repaired and reproduced antique furniture, a self-taught artist, a collector of Indian arrowheads and antique rifles, and a knowledgeable outdoorsman. He was a quiet man with a subtle sense of humor, and he inspired me in numerous ways, though I didn't realize it until it was too late to thank him.

While growing up in the 1950s and 1960s, a good many Sunday dinners were eaten at Grandma and Grandpa's house. After dinner, my three siblings and I would find some way to amuse ourselves, often with checkers or some other game (my grandparents did not have a television; in fact, there was no central heat or indoor bathroom!) while the "old folks" discussed weather, politics, neighbors, farming and who knows what else.

When Grandma and Mom decided to start dishes, Grandpa would calmly announce he was going for a walk. As if he had used a bullhorn, his four grandchildren crowded around him. "Are you going to the woods?" "Can we go?" He would agree to let us come, then don his red & black checkered wool hunting shirt, pick up his handmade walking stick with the likeness of a plains Indian chief in full headdress carved on the handle, and off we'd go.

One early spring day, we followed the well-worn single file path that circled the pond and headed into the lane that ran through the fields to the woods. Anyone watching our procession of a tall, lanky man with a walking stick and a pipe loosely hanging between his teeth, with four noisy kids hustling along behind him, would certainly think the Pied Piper was in the area.

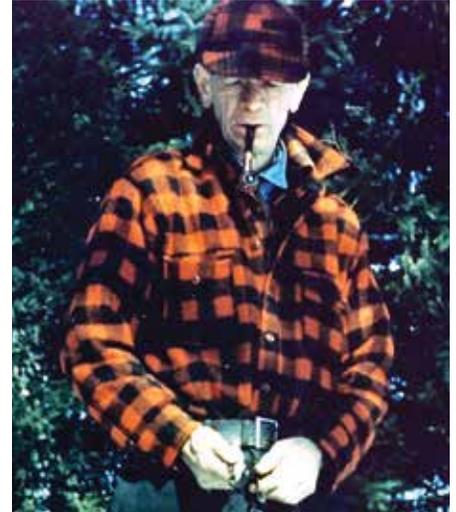
Before long we were confronted with tall evergreens, and suddenly everything was still and quiet. Even four ram-bunctious kids took on an almost reverent silence, as though walking into church. The pine needles cushioned our steps, and with the exception of an occasional snapping twig under our feet or the swishing breeze in the tree tops, there was silence.

Grandpa took his time when we were in the woods, stopping to point out something of interest in hopes that it might stick in our little brains: some fungus on a tree trunk, an early spring flower, a hole in a tree trunk used by some critter, a deer track. It didn't matter how small; he made sure we saw it.

This spring day, he pointed to a bright green patch in the otherwise dull brown of early spring. Leeks! The pungent-smelling, onion-like plants that show themselves for a few weeks in early spring were a treat. We managed to extract some small bulbs from the dirt and leaves, cleaned them off a bit and then... we ate them! Nearby, Grandpa leaned on his walking stick and puffed on his pipe. When he started to head towards the lane, we knew it was time to go.

At the house, we burst through the door and rushed across the room to show Mom and Grandma the souvenirs of our excursion: some tightly gripped handfuls of badly wilted spring flowers and...our breath. Grandma said the flowers were pretty, but complained about our breath. Mom said she might have to keep us home from school! Grandpa hung his plaid shirt by the door, slipped off his boots, and casually made his way to his

Author's grandfather



"den" where his gun collection covered the walls and his arrowheads were displayed in self-made frames. He sat down in the homemade ladder-back chair by the stone fireplace, lit his pipe and smiled.



The author as a child at his grandfather's home.

An industrial mechanic by trade, lifelong Wyoming County resident **Tom Clark** is a nature enthusiast whose camera is always close at hand.

Celebrate Arbor Day—April 24th

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