NEW YORK STATE

CONSERVATIONIST

FEBRUARY/MARCH 2023

What is a Fingerpost?

Raising Eaglets in the Catskills

Enhancing Bird Populations

Tracking Wildlife

Dear Readers,

In this issue of *Conservationist*, we highlight a variety of exciting outdoor activities, from tracking migratory wildlife, via the Motus Wildlife Tracking System (pg. 18), to keeping an outdoor nature journal (pg. 10), and banding birds at the Crown Point Reservation (pg. 24).

You can also learn how fish have become the "canaries in our streams," providing critical data about the environmental health of waterbodies across New York State (pg. 20). Fish can alert us to the presence of contaminants in the water (such as PCBs or mercury) that can harm fish and other species at the top of the food chain, like humans.

This issue also includes information about something you could encounter while exploring New York's woods. Fingerposts (pg.8) are wooden "signs" that can help point you to a trail or another interesting site. They are a great throwback to help direct you and provide critical information, while blending in with the environment, rather than relying on lights and signs that detract from the natural setting.

You can also learn about Virginia opossums found here in New York (pg. 14) or be captivated by the story of the Cobleskill Lovebirds (pg. 2). Since 2017, this remarkable pair of eagles have grown their family in the Schoharie area and will likely produce more eaglets to populate the greater Capital Region.

I also recommend reading the story of Bryan Burgin (pg. 12), a dedicated game protector and Environmental Conservation Police Officer (ECO) who served for more than 40 years. Although he passed away many years ago, Burgin's legacy endures, as people continue to benefit from his work and dedication.

We are fortunate to live in a state where nature provides so many opportunities to hike, explore, and appreciate the world around us. Check out some of the places we feature in the *Conservationist* or search for other places on our website. You won't be disappointed.

Sincerely,
Basil Seggos, Commissioner

NEW YORK STATE
CONSERVATIONIST

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Kathy Hochul, Governor of New York State

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New York State Department of Environmental Conservation

Bill Banaszewski

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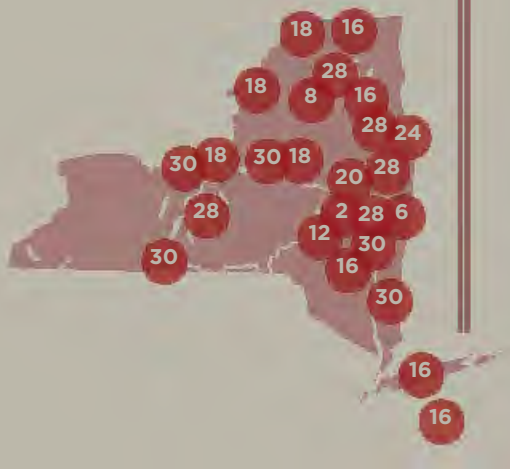


FEBRUARY/MARCH 2023 | VOLUME 77, NUMBER 4

SPECIAL INSERT

CONSERVATIONIST for kids!

FRONT COVER: Fingerpost, by Colin Duryea; **TOC PHOTO:** Tufted titmouse, by Bill Banaszewski; **BACK COVER:** Short-eared owl, by @greggardphoto

THE COBLESKILL LOVEBIRDS

BY BILL COMBS JR.
PHOTOS BY AUTHOR

PART 1

This story begins in a large cottonwood tree on the Connecticut River in Massachusetts. It is May 2013 when the State's Department of Environmental Protection bands a young male bald eagle and his two sisters at nine weeks of age.

About 10 weeks later, the young male is fully independent and ready to leave his family. In September 2013, he flies westward to Cortland, Ohio. From Ohio, he begins an 11-month journey north to Ontario, Canada and then slowly meanders the countryside southward. His journey eventually brings him to the small town of Cobleskill in upstate New York in late 2016. He is in search of a mate, which is not a simple task, as his choice will be for a lifetime. He spots the perfect female sunning herself in a large tree along the Cobleskill Creek, near open farm fields, ponds, and local reservoirs, ideal for hunting and fishing.

After a year of courting, he and his new mate pick out the spot to raise their young. It is now autumn in Schoharie County and the eagles have started building their first nest together. They share the workload and add new material to the nest almost every day. She pulls dried grasses from the banks of the creek and weaves them into the nest. He flies in with a big stick and places it just so. After admiring his handiwork, she picks it up, hops to the opposite side of the nest, and carefully repositions it where she prefers it to be. And so it goes.

As the winter months pass, the nest takes shape and the pair add final touches to the nest for comfort; the nest can now be viewed from the roadway. During the last week of March, the eggs have been laid and the hard work begins. Through rainy days, sunshine, cold nights, and late winter storms, the eagles protect those eggs until they hatch.

By late April, two fuzzy eaglets have emerged from their eggs. Dad and Mom take turns hunting and fishing to feed the two hatchlings and staying with them to watch for predators. The young will be fully grown in just nine short weeks. In another three to four weeks, the eaglets will be ready to take their first flight. After fledging (leaving the nest), they will remain nearby for the next six weeks, often returning at night or mealtime, while learning to hunt and fish by observing their parents' behavior. Fully independent now, the young eagles will start to wander the countryside like their father did.

Their parenting job for the year finished, the adult eagles now spend much of their time fishing at the Cobleskill Reservoir.

PART 2

It's now late fall 2018 and the eagles are fishing almost every day at the reservoir, building up their fat reserves for winter. Unlike some other migratory birds, the eagle pair will remain in Schoharie County all year long.

As winter begins, it's nest rebuilding time. Last year's nest did not hold up to the late summer and fall wind and rainstorms. The two eagles carry tree branches to three different trees, trying to determine which tree will hold the branches in place. After about three weeks, their choice becomes clear. Rather than rebuild the old nest, they have decided to establish a new nest in a cottonwood tree adjacent to last year's nest. This tree will give them more privacy and better shelter. They will now spend the next three months adding branches, twigs, and dry grasses to their nest, making sure it is ready when it's time for egg laying.

Most of February and into early March, you can find the two eagles together. March 14 arrives and there are now eggs in the nest. The patient eagles will each take turns sitting on the eggs for the next 34 to 36 days, on cold winter days, sunny days, rainy days, and one final snowstorm. While one parent stays in the nest and keeps the eggs warm, the other hunts and shares its bounty with their mate. By April 21, an egg has hatched—you can tell because the parents are sitting higher up in the nest than before.

The eagles have now successfully raised four young eagles. I can't wait to see where their story goes from here, as when a pair of eagles pick a spot to call home, it is their home forever.

PART 3

It is October 2019 and Canada geese have arrived at the Cobleskill Reservoir, on their annual migration south. The female eagle has successfully hunted one of them and has spent the past three days feasting. The male eagle never arrived to join her for breakfast, lunch, or dinner. As the temperatures drop, so do the fish; they stay lower down in the water and the eagles start hunting fowl. It's now the middle of November and the snow has started to fall, making it more difficult to see the white heads of the bald eagles in the trees.

By the end of November, the Cobleskill Lovebirds have started to rebuild last year's nest. It is a task that both share in for the next four months, through winter storms, rain, ice, and sun. Some days are nest building days, and some days are hunting days. When the first week of March 2020 has arrived, the nest rebuilding is complete, and eggs will soon be laid. On March 15, the adult eagles are now sitting on eggs, keeping them warm.

The two baby eaglets will spend the next three months in the nest, waiting for their parents to bring them food, and watching them hunt. The young eagles do not drink water for about the first four months of their life. As they are 60 feet up in a tree with no access to water, they obtain everything they need from the meat their parents feed them.

It's now late July and you can hear the immature eagles calling to their parents, wanting to be fed. The parents have started feeding them less frequently to encourage them to find food on their own. A one-year-old eagle made a surprising appearance at the nesting area. This juvenile spent the day hanging out in the trees near the nest. I assume it was one of last year's offspring, because the parents did not chase it away.

By late July, the baby eagles have left the nest and are spending some time at the Cobleskill Reservoir watching their parents fish for food. Every now and then, one of the parents will drop a fish on the bank for the young eagles to eat. The immature birds sharpen their fishing skills, flying low over the water until they are confident enough to try to snag a fish. It can be quite humorous watching their first attempts to fish, misjudging their speed or distance from the water, or landing on branches that aren't firm enough to hold their weight. Their fishing abilities will improve with practice, as will their perch selection.

It's now September and the two young eagles born this year are nowhere to be found. The parents spend a good deal of time preening and grooming themselves, as it is molting season and time for some new feathers.

On April 11, one of last year's baby eagles arrived back home for a short visit, landing in the nest tree, just above its parent, sitting on this year's eggs. The other adult eagle appeared and chased away the young eagle from the nest area. Just a few days later the eggs hatched, and now begins the constant feeding of the young eaglets from dawn to dusk. There is also a pair of red-tailed hawks nesting in the same area; they do a great job of staying out of the eagles' way. It's now April 28 and I have finally seen the small white heads of the baby eaglets, now we hope there will be enough food for both baby eaglets to survive and leave the nest in about 10 to 14 weeks. It takes about two weeks for the young eagles in the nest to turn from white to grey.

The Cobleskill Reservoir is the eagles' favorite fishing spot. Most mornings, I can find the adult male eagle on the ground near the shoreline of the ponds at the reservoir. The area around the reservoir and the areas around the nest are full of young animals born this year, providing plenty of food for the two adult and two immature eagles.

This brings their totals to six eagles born in Cobleskill and more than 20 bald eagles born this year in Schoharie County.

PART 4

By late fall 2020, the Cobleskill Eagles have started flying into the surrounding trees to break off some fresh new sticks to add to last year's nest. They will land in the trees and gnaw on young branches until they break, or land on one of the small branches and let their body weight break off the branch. As the end of March approaches, they will start to tear out sections of dry grasses from the nearby fields to help keep the nest warm and soft for the next 34 to 36 days, while they take turns sitting on the eggs to keep them warm.

It's late April 2021 and the eggs have hatched. You can now see more activity in the nest, as they start bringing food to the two young eaglets. With the location they picked for their nest, they have no problem finding enough food to feed them for the next 12 weeks. The eaglets have now learned how to use their wings and are flying around the area learning to hunt on their own and fish at the reservoir.

The Cobleskill Eagles have successfully raised this year's young eagles and have settled into their environment. The adults will spend August through November on their own, fishing and hunting. Their young eagles have now left the area; they are fully independent from their parents and starting to explore. As another year has gone by, it is time to start their routine of nest rebuilding for the upcoming nesting season.

It's now 2022 and the eagles have started their fifth year of nesting in Cobleskill. The nest has been rebuilt, the eggs have been laid, and two more baby eaglets have been born. The young eaglets have survived the past three months and are now ready to fledge the nest. They can be seen at the reservoir fishing and hunting daily. We will continue to see them in the surrounding area for the next few months until they leave the area in search of food, a mate, and a place to call home.

Our local Cobleskill eagles have successfully raised 10 eaglets, and I have learned so much from watching them. I hope to continue photographing and documenting their journey in this small town in the foothills of the Catskill Mountains of New York. With the average lifespan of a wild bald eagle being 20 to 30 years (reaching breeding age at five years), these eagles could potentially raise a total of 30 to 50 eaglets. With any luck, there will be many more eaglets to observe in Cobleskill in the years to come.

Bill Combs Jr. is a nature enthusiast, wildlife photographer, and founder of the Schoharie County Eagle Trail.

BY STACY PREUSSER

Over the river and through the woods east of Troy, is a rather unknown gem of State land called Capital District Wildlife Management Area (WMA), located in the towns of Berlin and Stephentown. Winter, spring, summer, or fall, if you are craving some Adirondack scenery, but don't quite have the time to drive to the 'Dacks, this 4,000-acre (soon to be 10,000-acre) parcel of woods is very much like a mini-Adirondack forest, just outside the Tri-City area.

While touring the many interior access roads (note: not plowed in winter), you may see deer, fisher, or even a moose. If the wildlife doesn't cooperate during your visit, you are sure to see some beautiful scenery from the many trails that meander past peat bogs, waterfalls, old charcoal pits, and ponds.

Visitors are treated to spectacular scenery any time of year they visit. During spring, the many streams, bogs, and wetland pools burst with woodland wildflowers, forest warblers, and pond-breeding amphibians. In the summer, the deep conifer greens mix with lighter hardwood emerald greens in a bridge of leaves that closes over the top of the woodland trails. Fall is when this WMA really shines, with bursting colors that amaze around every turn. Fall is also the best time to take a ride along Shaeffer Road to examine the young forest management work being conducted in this section of the WMA (to aid species in decline that rely on young forest habitat).

You can also admire the panoramic vista from 1,750 feet in elevation that looks out across the Cherry Plain towards Butternut Hill, Eagle Rock, and Mt. Greylock; it even offers a glimpse of Misery Mountain in Massachusetts.

In the winter, the WMA is silent; the higher elevations here typically see snow far earlier and for much longer than the lower elevations around the Capital Region. The snow-covered trails that meander through the woods are a favorite place for snowshoeing and cross-country skiing.

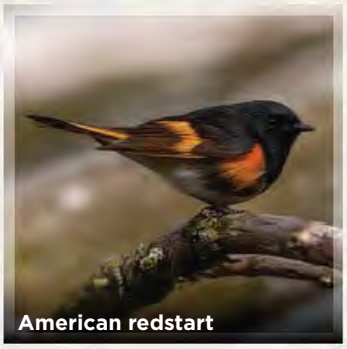
There are seven trails totaling nine miles in length across the entire WMA, generously maintained by the volunteer group Friends of Cherry Plain State Park. Each trail is a visual treat to the eyes, such as the Waterfall Trail, which follows the Black River as it flows over glacial boulders, creating small, tumbling waterfalls. There is also the Charcoal Trail, where large, circular charcoal pits were located in the 1830s to create charcoal that fueled blast furnaces for growing industries in Albany and Troy. Remnants of the pits can still be observed today.


Moose


Fisher

The Mill Pond Trail takes one to the destination it is named for—a pond that housed a mill in the early 1800s. Another trail, the Escarpment Trail, follows the ridge above Cherry Plain, offering glimpses of the valley below and mountains beyond. If hiking with your dog, remember pets must be leashed on WMAs to protect wildlife, and because there is a healthy population of porcupines in the area.


Indigo bunting


American redstart

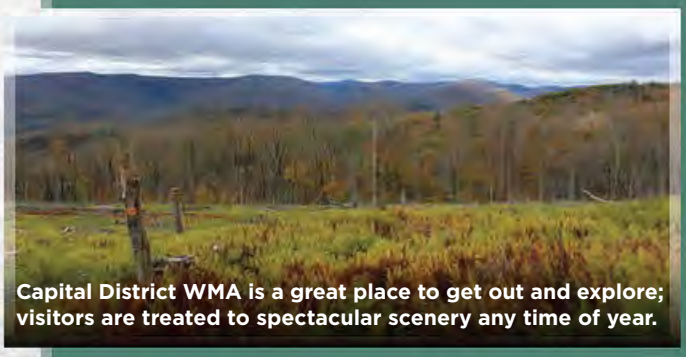

Red-shouldered hawk

Recreational opportunities at this WMA include hunting, trapping, fishing, birding, photography, cross-country skiing, snowshoeing, and hiking. With 4,000 acres to roam, this rugged, rocky property may not host large numbers of deer, but hunters who are willing to put in their time may be rewarded with a heavy, deep woods buck. The property also hosts abundant furbearer species, such as fisher, fox, coyote, and otter. Birders visiting the WMA are likely to enjoy seeing red-shouldered hawk, barred owl, indigo bunting, wood duck, American redstart, ovenbird, black-throated blue warbler, and Connecticut warbler.

With so many gravel roads and hiking trails, Capital District WMA is a great place to get out and explore. Conveniently located within the WMA is Cherry Plain State Park and Campground, a great place for those that want to spend several days exploring this vast property located just outside the Tri-City area in eastern New York.

Stacy Preusser is a Wildlife Biologist in the DEC Region 4 Schenectady Office.


The many interior roads provide access to 4,000 acres of varied habitats and opportunities to view wildlife.


Capital District WMA is a great place to get out and explore; visitors are treated to spectacular scenery any time of year.

Site Features

NOTES: Visitors will find parking areas at the east and west entrances of the WMA, located along Miller Road. There are also seven miles of interior roads that have pull-offs. Visitors are encouraged to print the map available online prior to exploring this large WMA. There are several opportunities for hiking, birding, photography, hunting, and trapping. Visitors should be aware that there may be intermittent cell service.

TRAILS: There are seven trails that explore each area of the WMA. A trail map is available online at **www.dec.ny.gov/outdoor/86016.html**, and there are trail markers along each trail to help guide visitors.

DIRECTIONS: Capital District WMA is located in the towns of Berlin and Stephentown, Rensselaer County. Miller Road runs through the middle of the WMA. The most common route is to follow Route 42 East to Miller Road. Along Miller Road there is a pull-off and kiosk. There is another parking area as you head east past the entrance to Cherry Plain State Park. Many of the trailheads are located along the interior roads and are identified with signs.

CONTACT INFORMATION: Call DEC at 518-357-2158 or write NYS DEC, 1130 North Westcott Road, Schenectady, NY 12306. Also check out **www.dec.ny.gov/outdoor/86016.html**.

FROM FINGERPOSTS TO GPS

BY PAIGE JAEGER

Some people follow their nose. Some follow their instinct. Others look for a knowledgeable local or turn on their satellite-connected GPS to give them accurate directions for driving, biking, walking, or finding a dirt road. But if you had lived 150 years ago, you would have followed a "fingerpost."

What's a Fingerpost?

You've seen them. You've probably been intrigued and stopped to read them. It warms my heart to see an arm like Uncle Sam's pointing directions, rather than a metal green and white street sign. In the 1800s, you would have included the word fingerpost in your daily directions. In fact, the word was so common that it was often used in an analogy. A simple search in today's historical newspaper archives will find the word used as a warning for bad behavior, or as a political direction. As our signage evolved, so did colloquial English, and fingerpost became a language casualty.

In today's high-tech age of flashing neon lights competing for attention, it's hard to imagine that people were once begging for signage. With the invention of the automobile, new motorists were seeking directions along roadways. Automobile owners would plan meetings to discuss exciting ventures, trips, and scenery worth "touring"—much like our local bike clubs, snowmobilers, or paddlers do today.

In the late 1800s, England erected more than 8,000 fingerposts for bicyclists. In parts of Europe, this type of street sign is still commonplace, but in America they are now more nostalgic decorations. Memorable fingerposts I've encountered include colorfully painted weathered wooden arrows on people's driveways or the Saranac Lake Inn's post, which points visitors to destinations near and far. Snowmobilers in the Adirondacks are fortunate to encounter fingerpost signs erected by clubs and enthusiasts along the more popular backwoods trails. The Department of Environmental Conservation's current trail markers are likely the nearest signs to fingerposts today.

In the late 1700s, you might have followed a fingerpost to George Washington's Mt. Vernon home. His biography by Ron Chernow describes Washington as having celebrity status after the Revolution, and people from all over wanted to meet him. Being annoyed by the ever-increasing paparazzi, Washington erected fingerposts pointing in the wrong direction. You see, back then, people really used them.

It was the Roman Empire that first ventured into providing directions via "milestones" for their 62,000 miles of roads, and this concept still exists on interstates with small green and white mile-markers. Fast forward to the world in which we now live, and we have electronic billboards, flashing lights, auditory signals for the blind, and GPS directions fed from satellites in the sky. It's comforting to know that the Adirondack Park Agency does not allow flashing lights, neon colors, mirrored or rotating signs, and externally lit signs—among other regulations designed to prevent what people come to the Adirondacks to escape.

Today's brown and yellow trail markers might be a throwback to the common fingerpost signage from the early days of the Adirondack Park. In 1924, a sign law was passed governing commercial signage and eliminating billboards within the Adirondack Park, as well as the

Catskill Park. Fifty years later, there were so many brown and yellow-lettered signs being used for camping, hiking, and many private organizations and businesses, that the Adirondack Park formally adopted those colors. In 1974, highway and transportation officials recommended codifying the yellow and brown signs for the Adirondack Park because "over a 40-year period, these have come to be recognized as Adirondack Park colors."

Most New Yorkers genuinely appreciate the Adirondack Park Agency and the efforts they make to keep our State Park forever wild, so that those who follow in our footsteps will be able to appreciate the same experiences we hold dear.

Many New York vacationers return annually to the same spot where they hiked mountains, sailed, learned to fish and swim, or where their best childhood memories were born. This personal migration reminds me of loons flying thousands of miles from their winter residence, returning to their place of birth. We've met ironmen returning annually to tire themselves out running a marathon after swimming in Mirror Lake and biking more than 120 miles around the Adirondacks. You may know aspiring 46ers who return year after year to accomplish their noteworthy goal, and paddlers who return annually for the 90-mile race ending at Lake Flower in Saranac Lake.

In the 1990s, we were raising a houseful of boys and knew that they needed somewhere away from the city to spend their summers fishing, biking, hiking, and having adventures. So, we purchased a small camp to "keep the family together." We no longer own the childhood homes where our children attended school, built tree forts, or broke the windows, but we still own our little cabin that all of our children refer to as "the homestead."

This is why we have erected our own fingerpost pole. It's a small tribute to friends and family making the annual migration. Our fingerposts include direction and mileage to Helsinki, Hartford, Donnelly's Ice Cream, our local favorite mountain, and other important family destinations. It's like an internal homing device that brings a smile.

So, if you're looking for a rainy day project, why not plan to make your own nostalgic fingerpost. With the help of Google Maps, you can find the exact mileage from your neck of the woods to wherever in the world your friends and family migrate from. After all, it's a throwback to yesteryear, when life was much simpler.

Paige Jaeger lives and hikes in the Adirondacks, and is the author of two children's books about endangered species.

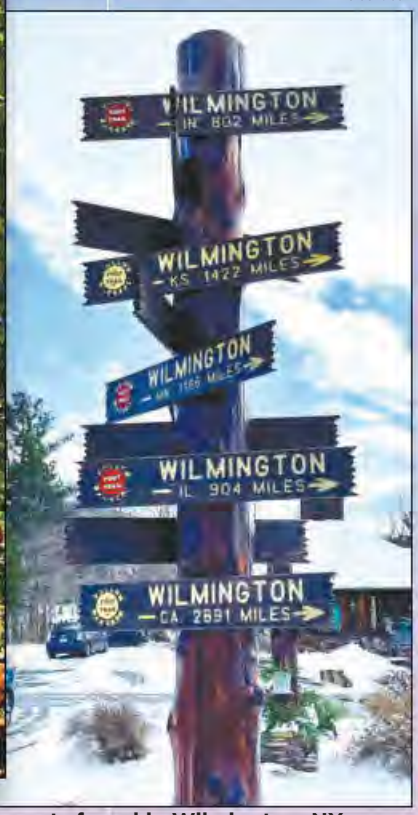
Becca Mason

DEC Fingerposts along popular high peak trails

Paige Jaeger

Nostalgic fingerpost in Vermontville, NY

Michael Grau



Fingerposts found in Wilmington, NY

Nature Journaling

THE ART OF SEEING

BY MARY ELIZABETH

Last winter, my brother Warren and I began sharing our backyard bird observations with each other. It quickly became a friendly competition of who saw the most blue jays, cardinals, or chickadees at our backyard feeders. He introduced me to phenology. As defined by Websters, phenology is "a branch of science dealing with the relations between climate and periodic biological phenomena (such as bird migration or plant flowering)." Simply put, it's a study of how the change of seasons affects the environment and living things around us.

Scientists and researchers use phenology as nature's calendar. Monitoring the timing of changes in weather, the flowering of plants, or migration of birds can help in managing invasive species. This information can also help predict and plan for wildfires, floods, and droughts, and be used to predict seasonal allergies and flu strains.

I am by no means a scientist, but I am interested in the natural world around me. I began keeping a journal of what I observed in nature. In a generic, spiral-bound, ruled notebook, I wrote basic notes on the weather, temperatures, and birds I watched. As I slowed down to take the time to observe nature more closely, my journal grew. I added notes on what the birds ate, their behaviors and interactions with one another, and what times of day I saw them.

My interest in journaling and phenology grew, and I found an endless stream of resources and inspiration online. From complex, detailed phenology wheels to bound notebooks like mine, there seemed to be no right or wrong way to record natural events. Eventually, my approach to data collection turned into a nature journal of small watercolor sketches to accompany my notes.

I don't faithfully keep track of what I experience every day in my journal, but I am certainly more mindful of my surroundings and appreciative of the ordinary. I've challenged myself to look beyond what is directly in front of me and to look closer, from different perspectives or viewpoints. When I'm out hiking, I'll make frequent stops to get close to the lichens clinging to boulders or lay on the ground to photograph a tiny mushroom emerging from a rotting log.

We've all heard the phrase "stop and smell the roses." However, how often do we actually take time out to do that? One statistic from the Environmental Protection Agency reported that Americans spend 87 percent of their time in enclosed buildings and another six percent in automobiles. This staggering statistic is a good excuse to make a new resolution to find more time to get outdoors.

Grab a notebook and a pen (or some watercolors or colored pencils). Go sit in the park or take a hike in the woods. Start by writing down the date, time of day, where you are, and the weather. Then be still, look, and listen. Do you hear a birdsong you're familiar with or the sound of crickets or frogs? If it's winter, do you see tracks in the snow? Are the buds emerging from a maple tree on the first warm day in spring?

Take notes on what you see and hear; you will be amazed at how much nature you may have taken for granted in the past. No matter where you live, you will find a whole world worth observing and documenting.

To learn more about phenology, check out *Phenology* by Stacy McNulty in the February 2017 issue of *Conservationist*, go to: **www.dec.ny.gov/docs/administration_pdf/0217consmag4web.pdf**.

Mary Elizabeth is a graphic designer for DEC.

Citizen Science Projects

Did you know that your nature observations could assist scientists and researchers collect important data that could help address an important environmental concern? DEC has multiple opportunities for volunteers like you.

Citizen science is the collaboration of scientists and people with an interest in nature or the environment. Citizen volunteers participate in a variety of ways, from counting frogs on a warm, spring night, to collecting ruffed grouse feathers in autumn. To learn how you can get involved, go to: **www.dec.ny.gov/animals/1155.html.**

Who Was GAME PROTECTOR BRYAN BURGIN?

BY CAPTAIN THOMAS CAIFA

Thanks to YouTube™, many people have been reintroduced to the now classic *Game Warden* short film. If you haven't seen it yet, you're in for a treat. Use the web address below the image of the TV set to check it out.

This eight-minute short film was released in 1955 by RKO Pictures. The film starred New York State Game Protectors Bryan Burgin and Bob VanBenschoten, who would later become the New York State Environmental Conservation Police Director. Game Protector was the official title used by the New York State Environmental Conservation Police when the division began in 1880. The title was changed to Conservation Officer in 1962.

What most people don't realize is that this short film was shown as a trailer preceding feature films on thousands of movie screens across the country. As a recruitment tool, it was ahead of its time and probably resulted in many game warden/conservation officer job applications across the United States. The film took months to prepare and was considered a serious project by RKO, one of the bigger movie production companies of that time.

So, who was Bryan Burgin and why was he chosen for this short film?

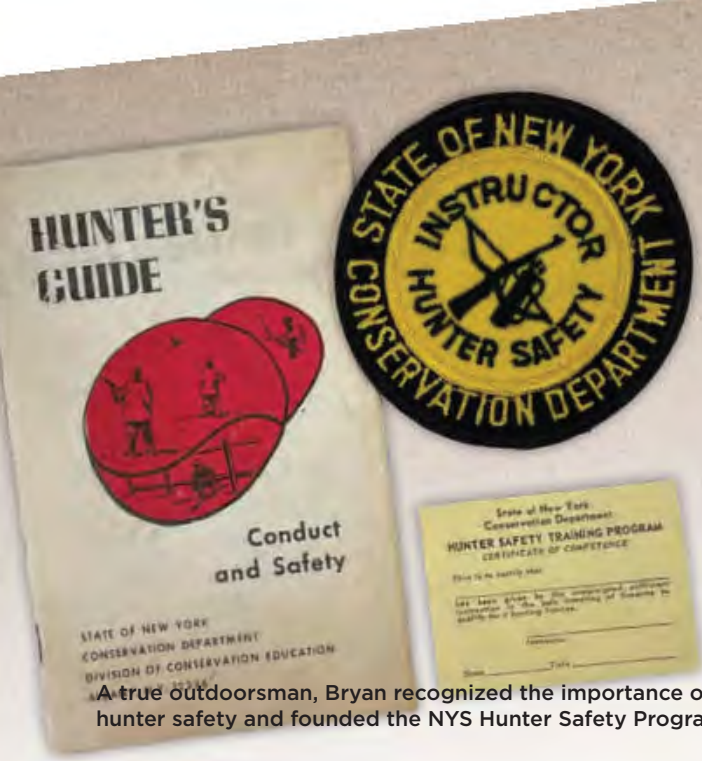
Watch the short film *Game Warden* at **www.youtube.com/watch?v=PyJOe9ihdn0.**

Bryan was born on New Year's Eve in 1908. He grew up on a small farm in the town of Delhi, Delaware County, and graduated from Delaware Academy. At 6′ 4″ tall and weighing about 230 pounds, he was an imposing figure. If you look closely, you can see that he towers above just about everyone else in the film. Despite his size and solid build, Bryan was considered a gentle giant.

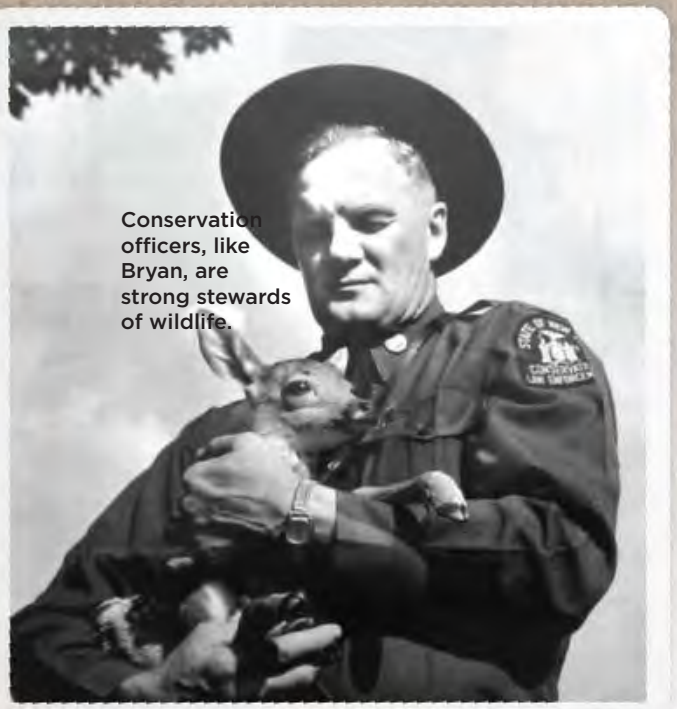
Bryan was appointed as a Game Protector in 1932. He spent his entire career in Delaware County, where he resided in Margaretville with his wife and children for his entire adult life. Like many Game Protectors of the time, Bryan enlisted in the army and served during World War ll. When he came home, he went right back to work as a Game Protector. In 1947, he was promoted to Assistant District Game Protector (a supervisory title that would be a lieutenant today). In 1959, he was promoted to the prestigious rank of District Game Protector (a captain today).

Bryan was one of the most well-known and well-respected Game Protectors of his day. His peers revered him, and the public knew him as a true gentleman and fair authority figure. Bryan believed in community policing and lived his life as an integral part of his community. He was a member of the Margaretville Fire Department and the local Rotary Club. He was also a chaplain at his local American Legion post and served as chairman of the Margaretville Hospital Board.

Bryan always considered himself to be an educator first and a police officer second. His biggest claim to fame was his devotion to New York State's Hunter Training Program. Bryan is considered to be the founding father of New York State's Hunter Safety Program (started in 1949) and a co-creator of the first mandatory hunter



A true outdoorsman, Bryan recognized the importance of hunter safety and founded the NYS Hunter Safety Program.



Conservation officers, like Bryan, are strong stewards of wildlife.

safety course in North America. Because this was the first program of its kind, it became a model for many other states. Bryan travelled across the country in the early- to mid-50s, helping other fish and wildlife agencies set up their training programs. Bryan went beyond the borders of the United States on several occasions, helping with hunter safety programs in Canada and as far away as Argentina. He also supervised and coordinated the entire New York State Hunter Training Program for nearly 20 years (1953 to 1972).

In 1972, Bryan became the first president of the North American Association of Hunter Safety Coordinators, the organization that would later become the International Hunter Education Association (IHEA). IHEA is the home of the Hunter Related Shooting Incident School, which is regularly attended by conservation officers and investigators from around the country. In 1980, Bryan was one of the first two people inducted into that organization's Hunter Safety Education Hall of Fame.

Bryan retired as a captain in 1975, after 43 years as a Game Protector and Environmental Conservation Police Officer, but he wasn't done yet. In 1985, he was selected as Grand Marshall for the New York State Forest Preserve Centennial in Lake Placid, a huge political event at the time. Think about that for a minute—a retired Conservation Officer was chosen as the Master of Ceremonies for the 100-year celebration of the Forest Preserve. That shows just how much respect the entire DEC had for Bryan.

Bryan passed away on September 20, 1986, at the age of 77. He devoted more than half his life to conservation education and law enforcement, and made an impact that can be felt to this day. The New York State Environmental Conservation Police Officers created an award in his honor. The Bryan Burgin Award is presented annually to an Environmental Conservation Police Officer who, through acts of conspicuous dedication, promotes the work of the division through public education and outreach.

Sometimes we take for granted the various programs designed to connect people to the outdoors and promote outdoor safety and conservation. Bryan played a big role in such efforts, serving as an active steward of our environment, including public safety, and promoting outdoor recreation.

Bryan always considered himself to be an educator first and a police officer second.

He was an environmental advocate and never stopped preaching the opportunities in the outdoors, and the need to be prepared for whatever nature has in store.

People like Bryan Burgin should come to mind when enjoying New York's natural resources. His devotion of time and knowledge for more than four decades so that others could connect with nature is truly commendable.

It is undoubtedly a lasting, well-deserved legacy for a man who loved the outdoors and encouraged generations to take advantage of New York's abundant lands, forests, and waters.

Thomas Caifa is a New York State Environmental Conservation Police Captain in DEC Region 4.

SPECIES SPOTLIGHT

THE VIRGINIA OPOSSUM

BY BILL RHODES


Jack Bulmer

The Virginia opossum (*Didelphis virginiana*), commonly referred to as "possum," is found throughout New York State, from urban parks to suburban woodlots and rural forests. This animal is unmistakable—cat-sized and prehistoric-looking, it is covered in grayish brown or black fur with a white face, pink nose, and a long prehensile (able to grasp) hairless tail. While there are more than 60 species of opossums found in the Americas, the Virginia opossum is the only one in the United States, and the only marsupial found north of Mexico.

First migrating from Central America some 800,000 years ago, they have spread from coast to coast. During the last 100 years, this primarily subtropical species has made it as far north as Canada. Although they are widespread, they are mostly nocturnal and secretive, and may be spotted foraging in trash cans at night, or as unfortunate victims of cars on rural and suburban roadways.


Laura Ann

Description/Diet/Behavior

Adept tree climbers, they use their prehensile tails to balance on tree branches, and young opossums might briefly hang from a branch or a twig by their tail. Unlike the cartoon opossums, adults do not hang from their tails in trees or sleep that way. Although, they often use their tails to grab and carry twigs and branches into their dens. Their feet are unusual, as they have an opposable toe, like a human thumb, allowing them to grasp items when they climb or feed.

There is ample truth to the phrase "playing possum," meaning to play dead. When confronted, an adult will hiss, drool, open its mouth, and show its sharp teeth. This is not only frightening, but the abundant drooling may also signal sickness to a would-be predator, and they may avoid the opossum out of a natural precaution. If that doesn't work, and they continue to feel threatened or extremely frightened, they will fall over on their side, mouth agape, tongue out, drooling, and unresponsive, appearing dead.

Predators who eat live prey will sometimes then leave without killing or attempting to eat them; others will poke and prod, but then leave. When the danger has passed, the opossum revives and goes on its way, although it may take a few hours for the animal to actually "come back to life." It is not fully understood if "playing possum" is a deliberate tactic, or an involuntary reaction to intense fear, but either way, apparently it tends to work.


Nancy Comer


Laura Ann


Nancy Comer

Opossums are opportunistic omnivores, eating vegetation, insects, carrion, small mammals, birds, amphibians, and reptiles, and in captivity they have been known to be cannibals. While often annoying homeowners who find them at night at their trash cans, they may be more interested in the rats, mice and cockroaches that could be attracted to open garbage bins. They are unusually short-lived, with a lifespan in the wild of only about two years. Even in captivity, opossums tend to only live about four years.

Their mouthful of teeth is unique among mammals in North America. Not only do they have 50 of them, more than any other North American mammal, but they have large, sharp canines and 18 incisors. Yet they are not aggressive, feigning death over fighting. That said, they can certainly inflict a painful bite to anyone carelessly picking one up barehanded.

Opossums appear to be resistant to rabies, due to their fairly low body temperature. They are also resistant to snake venom, having peptides in their blood that bind to the venom's chemicals and effectively block them from causing harm. They are also the perfectly-sized prey for coyotes, bobcats, and even alligators in their southeastern range.

Opossums do not hibernate, although they will den during cold months and tend to only come out during warmer periods. Their naked tail and ears are susceptible to frostbite in more northern areas, and occasionally animals are seen with portions of their tails missing, having suffered from the cold. They are solitary animals, with males and females only coming together to mate, and then going their separate ways.

Life History

Females have as many as three litters per year, with a gestation period of just about two weeks, and have as many as 25 offspring, called joeys. The joeys are born tiny, honeybee-sized, with strong front legs but little else. Their mother licks a path to her pouch, which encourages the babies to make their way from her birth canal to her pouch, where she has 13 nipples. Not all joeys make the journey safely, and not all of the nipples may produce milk, so generally only eight or nine young make it to safety and nourishment. These tiny helpless joeys remain nursing in her pouch for about two months, and then leave the pouch and climb onto her back, carried about, learning to forage. They stay with their mother for another few months, until falling off and finally leaving to fend for themselves.

Opossums are a part of American culture, featured in cartoons, such as the main character in Walt Kelly's *Pogo*, an iconic comic strip. Opossums once made up an important part of early settlers' and rural communities' food protein source, and are hunted and prepared for meals to this day. They are featured in Native American stories and folklore, and the name itself is thought to be derived from the Algonquin word for "white face."

So, while it may not have the prettiest face in the neighborhood, the opossum is a neighbor to be respected. It should also be appreciated for its role in cleaning up carrion and refuse, and simply because it is a secretive, peaceful, resilient, unique, and unusual marsupial, and it's the only one we have here in the United States.

Bill Rhodes is a freelance writer and avid naturalist.

Fun Facts

- Opossums have more teeth (50) than any other terrestrial mammal in North America.
- It was once believed that male opossums mated with females through her nose, and she would then sneeze the babies into her pouch. This myth likely arose from the fact that females lick a path to their pouch when they give birth, making a sneezing sound while doing it.
- Like kangaroos, young opossums are called joeys. Males and females are called jacks and jills, respectively.
- The opossum gestation period is about 12 days, the shortest of any mammal.
- Opossums are immune to many venomous snake bites. A protein found from their blood has been isolated and is being researched as a potential antivenom.
- Despite having one of the smallest brain-to-body size ratios of any mammal, research has found that opossums have a remarkable memory, outperforming rats, rabbits, dogs, and cats in different studies.
- Opossums are sometimes referred to as living fossils, with an evolutionary history tracing back to the extinction of the dinosaurs.

On Patrol

Real stories from Environmental Conservation Police Officers and Forest Rangers in the field

Offshore Fishing Enforcement—Atlantic Ocean

On October 22, Lieutenant Auguscinski and ECOs Milliron and Parmelee conducted an offshore boat patrol targeting Highly Migratory Species (HMS) vessels in the Atlantic Ocean's Economic Exclusion Zone, where the US and other coastal nations have jurisdiction over natural resources. The Officers checked several boats and found two in possession of black sea bass smaller than the federal size limit of 12.5 inches. One vessel, with six yellowfin tuna on board, failed to present a current HMS permit, required by federal law. ECOs referred the violations of federal regulations to the National Oceanic and Atmospheric Administration's National Marine Fisheries Service for investigation and potential prosecution.

Plane Crash—Fulton County

On October 9, ECO Pasciak responded, along with other first responders, to a small plane crash on the Great Sacandaga Lake in the town of Northampton. Fortunately, the pilot and two passengers survived the crash and only one passenger required medical attention. The pilot reported that a crosswind caused the plane to crash and flip upside down, just slightly above water during an attempted takeoff from a sandbar. Officer Pasciak notified DEC Spill Response staff to investigate any potential fuel or petroleum spills from the incident. The plane was safely removed, and no fuel oil was spilled.

Hoarding Wildlife—Suffolk County

On October 18, ECOs received a call requesting assistance with an animal hoarding case. ECO Dickson and DEC Wildlife staff responded to a home where they found several bird species. They identified a grackle, American robin, and mourning dove, along with hundreds of other birds, such as cockatiels, love birds, finches, and parakeets. A tortoise and several cats were also found. The Suffolk County District Attorney is handling the case with assistance from the Suffolk County Society for the Prevention of Cruelty to Animals to ensure appropriate care is given to the animals kept inside the home. It is illegal in New York to possess native wildlife.

Carl Heilman II

Search Turns to House Fire and Rescue—Hamilton County

On October 31, New York State Police (NYSP) requested Forest Ranger assistance in locating a subject reported as an overdue hunter. Ranger Lieutenant Kerr and Rangers Miller, Nally, and Scott responded to the Blue Mountain trailhead, where NYSP found the subject's car. The Rangers searched through the night, and on the following day, a passerby alerted Rangers to a nearby housefire. Rangers and Hamilton County Sheriff's Deputies pushed through the door and found the subject of the search unconscious on the floor and pulled him to safety. Rangers Geesler, Scott, and Temple provided medical treatment until EMS arrived and transported him to the hospital. The subject faces multiple charges, including arson and burglary.

Missing Hunter Found—Franklin County

On November 8, Forest Rangers Booth, Bronson, Praczkajlo, and Russell responded to a report of an overdue hunter in the town of Dickinson. The reporting party found the 79-year-old's vehicle near Mosier Hill, but could not find the missing hunter. While conducting linear searches, Ranger Praczkajlo noticed something shiny in the woods, it was the hunter's rifle. The Rangers found the hunter scratched, bruised, and hypothermic after falling into a swamp. Rangers removed his frozen clothes, put him in a hypo wrap, and started a fire. Rescuers, which included St. Regis Falls Fire, New York State Police, and local camp owners, carried the subject out to an ambulance that transported him to the hospital.

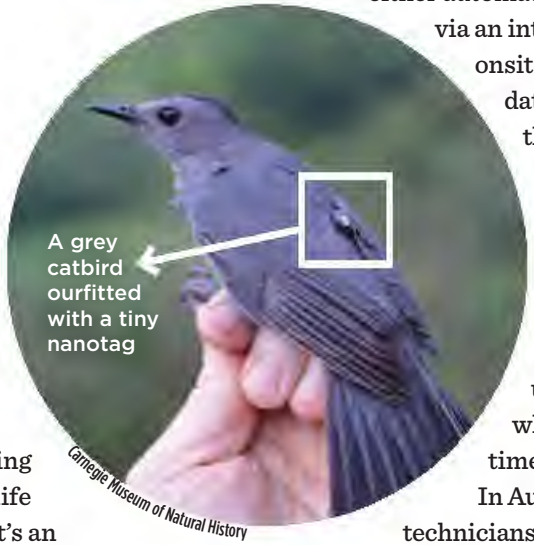
Injured Hiker Rescued—Ulster County

On November 5, Forest Rangers Franke, Jahn, and Kreft responded to a report of a hiker with an ankle injury approximately one mile into the red trail in Shawangunk Ridge State Forest. Rangers and Cragsmoor Fire personnel took a fire department UTV as far as terrain allowed. The 57-year-old from Stony Brook could not put any weight on her ankle. Rangers splinted the injury, carried the hiker to the UTV, and helped her out of the woods. Ellenville Volunteer Ambulance examined the hiker at the trailhead, and she declined further medical treatment.

Tracking Migratory Wildlife

With the Northeast Motus Collaboration

BY KATHERINE YARD
AND ALISON FETTERMAN


A grey catbird ourfitted with a tiny nanotag

Carnegie Museum of Natural History

The New York State Department of Environmental Conservation (DEC) has partnered with the Northeast Motus Collaboration to install Motus wildlife tracking stations on Wildlife Management Areas (WMA) throughout the state as part of the Motus Wildlife Tracking System. What is the Motus Wildlife Tracking System, you may ask? It's an international collaborative network of researchers that uses automated radio telemetry to track thousands of individual migratory birds, bats, and insects.

A vast network of Motus receiving stations—more than 1,400 and growing—provides the foundation for this fascinating field of study. The entire network is overseen by Birds Canada and supported by numerous agencies and organizations. The partners have helped build the infrastructure for the Tracking System, and international researchers have been able to tap into the power of this collaborative effort.

Wildlife researchers attach tiny tracking devices to birds and other species to determine when, where, and how these animals move across the landscape. This knowledge will help us better understand, manage, and protect wildlife species that are too small to be tracked by other methods. To date, researchers on four continents have tagged nearly 300 species to study using this approach, including songbirds, shorebirds, bats, butterflies, and dragonflies.

What We're Learning

The seven monitoring stations on WMAs in New York State have detected 406 individual animals representing 40 different species of birds and one species of bat, including several Species of Greatest Conservation Need. These detections on WMAs have contributed to 29 research projects designed to improve understanding of bird movement, migration, and full life cycle conservation. Here are just a few highlights:

When an animal fitted with a transmitter flies within approximately 10 miles of a station, data about that animal are instantly recorded. Depending on the station, data are either automatically uploaded to a centralized database, via an internet or cellular connection, or archived onsite until a technician manually retrieves the data. The more stations located throughout the landscape, especially in strategic locations, the more likely it is that a tagged animal will be detected at one or more stations. Over time, connecting the dots between detections reveals each animal's story—where they spent the breeding season, what route they took and stopovers used during spring and fall migration, and where they overwintered—complete with a timeline of their arrivals and departures.

In August and September of 2020, Motus technicians installed stations at Perch River WMA in Jefferson County, Upper and Lower Lakes WMA in St. Lawrence County, Three Rivers WMA in Onondaga County, Rome WMA in Oneida County, and Lake Shore Marshes WMA in Wayne County. In October 2022, an additional station was installed at the Capital District WMA (see page six) in Rensselaer County.

These new stations aren't our first foray into remotely tracking wildlife with Motus. In August 2017, DEC installed a Motus tower at Northern Montezuma WMA in Wayne County, one of the first stations in New York State. Currently, DEC's main role is to provide locations on State land to house stations in support of the overall Motus collaboration, fill strategic gaps in network coverage, and support research projects that other agencies, universities, and organizations are conducting.

- A horned lark tagged near Tadoussac Bird Observatory in Quebec, Canada in September 2021 likely traveled through eastern New York in the fall, down to Delaware. The bird was then detected in Pennsylvania in March 2022, traveled up to Three Rivers WMA in April, and returned to just south of the original tagging site by May 19, 2022. This research project is looking at the fall migration routes of American pipits and horned larks captured at a bird banding station in Quebec. Horned lark is a High Priority Species of Greatest Conservation Need in New York State.

- An American redstart tagged at the Font Hill Nature Preserve in Jamaica on April 17, 2022 was detected in Florida on May 19, central Pennsylvania on May 26, and most recently at Lake Shore Marshes WMA on May 27. This bird was tagged as part of a long-term research project investigating the connection between nonbreeding conditions, spring departure timing, and migration.

Map courtesy of Motus.org

- A chimney swift that was tagged in Quebec traveled across four Canadian provinces and three states from May 23, 2021 to July 16, 2021. During this amazing flight, this bird was detected at Perch River WMA on May 30 and 31, and quickly crossed northern New York before being detected on the edge of Lake Champlain in Vermont on May 31 and June 1. This bird was tagged as part of a Quebec-based project exploring chimney swift habitat selection during the breeding season, as well as fall migration routes.

Todd Alleger/Northeast Motus Collaboration

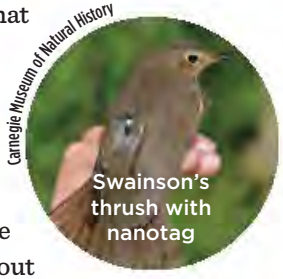
Motus receiving station co-located on a building at Three Rivers WMA, Onondaga County.

Inner workings of the Motus receiver that collects data from tagged animals

The Power of Partnerships

One of the greatest advantages of Motus is that the whole system is highly collaborative. Data are available to view and explore local, regional, and even international movements of tagged wildlife. This allows researchers and wildlife managers access to a growing body of knowledge that spotlights the connections between where these animals raise young, migrate, and overwinter.

With all the challenges wildlife face—climate change, habitat loss, and more—protecting these species and their habitat throughout all aspects of their life cycle is more important than ever. As we gain a deeper understanding through Motus, we can collectively focus our conservation efforts to avoid impacts during critical times of the year, protect and improve habitat in places that provide the greatest benefit, and raise awareness about conservation of migratory birds, bats, and insects.



Perhaps the most exciting aspect of Motus is that these new insights aren't just available to scientists, they're available to everyone. To learn more about the Motus Wildlife Tracking System, view data collected, and explore resources for students and educators, visit: **www.northeastmotus.com** and **motus.org**.

Katherine Yard is a Certified Wildlife Biologist at DEC; **Alison Fetterman** is the Project Manager of the Northeast Motus Collaboration and a Bird Conservation Associate at Willistown Conservation Trust.

Fish—The

Since the early 1900s, coal miners would take caged canaries into mines to alert the miners of high levels of carbon monoxide and other harmful gases. Canaries have higher breathing rates than humans, so if gas levels were elevated, the canaries would quickly fall ill. This would warn miners of impending danger and give them enough time to escape safely.

Like canaries, fish are excellent indicators of environmental health. Contaminants such as polychlorinated biphenyls (PCBs), mercury, and per- and polyfluorinated substances (PFAS) can build up in the environment and accumulate in an organism's body. For species at the top of the food chain, the concentrations of many of these chemicals become greater as they consume other species that have ingested these contaminants. Predators like bears, eagles, and humans can accumulate these chemicals in their bodies, which can cause harm.

By analyzing fish, we can determine what chemicals are found in the water where the fish live. Fish can absorb chemical contaminants in two ways: directly from the water, and by eating smaller contaminated organisms. Testing and analyzing fish samples can help us make informed decisions about what we eat, and help us evaluate the overall health of a waterbody and its watershed.

Analyzing fish for contaminants is a lengthy process, beginning with fieldwork. Department of Environmental Conservation (DEC) staff routinely sample fish from waterbodies across New York State. Agency biologists collect roughly 1,200 to 1,500 fish each year for analysis. DEC Division of Fish and Wildlife Biologist Kristen Dieterle and her crew focus their efforts on the Hudson River. They collect fish from a boat outfitted with electroshocking equipment, or with backpack mounted equipment in shallow waters.

An electrical field is sent through the water which stuns the fish, allowing staff to collect a variety of different species in hand-carried nets. They then weigh, measure, and tag each fish with a number. The fish are then sent to a freezer and eventually to an analytical lab. In the spring, staff from DEC's Bureau of Ecosystem Health and the Hudson River Fisheries Unit collect larger sportfish, such as bullhead, perch, striped bass, and black bass. In the fall, the crew collects smaller fish, such as shiners and pumpkinseeds.

Some of the fish collected are sent to DEC's Hale Creek Field Station in Gloversville, NY. There, chemists and biologists test fish species, primarily analyzing traditional sportfish that are consumed by people. Dave Bryk, an environmental chemist and Hale Creek Lab Director, and other staff test the fish for contaminants, such as PCBs, mercury, and PFAS. To test for these harmful contaminants,

Canaries in Our Streams

BY EMMA ANTOLOS

staff at the Hale Creek lab must first process the fish. Some fish are simply filleted (to test what people eat) and then ground up. Other fish are processed in full, bones and all, into a consistency like tuna salad. A different process is used for analyzing each type of chemical.

PCBs are toxic manmade chemicals that were used primarily in electrical equipment. When released into the water, PCB levels can accumulate in sediments, as well as in the fat in fish. The federal government banned production of PCBs in 1978, but dredging of sediments and cleanup efforts continue across New York State to this day. To test fish for PCBs, staff conduct a two-and-half-day extraction process and then use a gas chromatography electron capture detector to determine the level of PCB buildup in a fish's body.

Electrofishing from a specially-equipped boat allows biologists to temporarily stun and collect specific species of fish to monitor for contaminants; fish that are not collected are able to swim away.

To view a video of staff from DEC's Division of Fish and Wildlife electroshocking and collecting fish on the Hudson River to analyze them for contaminants, go to: **www.youtube.com/watch?v=dZJMWJA6czs**.

While mercury is a metal that occurs naturally in the environment, most mercury now comes primarily from human activities. It is released into the air through mining gold, burning coal, and other industrial activities. Atmospheric mercury falls onto land and waters through rain and snow, or by dry deposition. Mercury can also leach into waterbodies through industrial discharges and leachate from older landfills. Once mercury gets into a waterbody, bacteria process it and create organic methylmercury, which is then taken up by organisms in the local environment.

Exposure to high levels of methylmercury can have negative health impacts, particularly to the human nervous system. To test for mercury levels, DEC staff analyze fish tissue by using an instrument called a direct mercury analyzer. This instrument burns the tissue and then analyzes the vapors. In just six minutes it can determine how much mercury is in a sample.

PFAS, or per- and polyfluoroalkyl substances, are used to make coatings for products that resist heat, oil, water, and more. These coatings are used in products such as water-repellent clothing, furniture, non-stick cookware, and as a firefighting foam. Scientists are still determining the effects these chemicals have on human and environmental health, and DEC staff collect data from across the state to determine how prevalent these chemicals are in fish and wildlife. To test for PFAS, staff conduct a two-and-a-half-day extraction process and use an instrument called a liquid chromatography mass spectrometer to determine levels in each sample.

Once the samples are analyzed, the results are checked for errors and evaluated. The data is used in multiple ways. The New York State Department of Health uses it to establish health advice on eating sportfish. These fish consumption advisories help people make healthier choices about which fish to eat, and how much. The data can also help inform environmental remediation efforts. If fish from a particular sampling location have elevated levels of a certain chemical, remediation work may be conducted at the site to help reduce contamination levels. This may include dredging of sediments, installing water treatment systems, and more.

When asked about successes within the fish monitoring program, Research Scientist Wayne Richter points to a project at Lake Champlain's Cumberland Bay as an example. The site was contaminated with PCBs by a former paper manufacturing company. DEC classified the site as a State Superfund site and required the PCBs be removed from the environment. Following the cleanup efforts, staff collected additional samples and analyzed fish, and found that PCB levels were still high, even after the cleanup. Using that information, remediation efforts continued and eventually PCB levels were reduced and the area-specific fish consumption advisory for Cumberland Bay was removed. People can once again safely eat fish from an area that was historically contaminated.

Kristen Dieterle notes that pharmaceuticals are an important group of new and emerging chemicals to consider. Currently, there is no way for sewage treatment plants to remove pharmaceuticals before discharging water back into the environment. Whatever drugs we ingest, there is a risk that they will enter nearby waterbodies through


Johnstown Hatchery, 1974


Field station under construction in 1976


Hale Creek Field Station, 2010

wastewater effluent. Research has found that fish living near wastewater treatment plants can have elevated levels of antidepressants. Scientists are still researching the impacts drugs like these may have on fish behavior, but there is evidence that pharmaceuticals can alter fish survival instincts and feeding habits.

Richter notes that fish are excellent "environmental sensors." They help tell the story of what's going on in a waterbody. Fish also remind us that in an ecosystem, we are all connected. What we put into our water, air, and land doesn't simply go away. These compounds can eventually end up in the food we eat. This should serve as a reminder—we cannot be shortsighted when it comes to decisions that may affect the environment. Our actions today will have consequences on future generations.

Emma Antolos is a Public Participation Specialist in DEC's Central Office.

At right: Environmental Chemist Shabbir Alam prepares samples for analysis
Below left: Extraction of PCBs from fish tissue samples
Below right: Research Scientist Katryn Williams centrifuges samples for PFAS extraction

Hale Creek Field Station

In the 1970s, DEC converted the former Johnstown Hatchery into the Hale Creek Field Station. The primary purpose of the new field station was to gather the data necessary to safeguard fish and wildlife resources from a multitude of pollutants. Managed by the Bureau of Ecosystem Health in the Division of Fish and Wildlife, the lab analyzes approximately 1,500 fish and additional wildlife samples annually for industrial contaminants.

These data are used by DEC to assess contaminated sites and determine changes in the pollutants in the environment over time. The data is also used by the New York State Department of Health to set fish consumption advisories, so anglers can make informed choices about eating their catch. In recent years, DEC has expanded the Field Station's capabilities to assess the presence of PFAS chemicals in fish and wildlife.

The Field Station is situated on more than 80 acres that are open to the public during daylight hours. Visitors can hike, snowshoe, or cross-country ski on marked trails, or observe trout that are raised in the site's ponds. For more information on the Hale Creek Field Station, go to: **www.dec.ny.gov/outdoor/124961.html**. To view of video about the Hale Creek Field station, see **www.youtube.com/watch?v=grhlTxJ7wW4**.

BANDING TOGETHER FOR BIRDS

BY KEVIN FARRAR

On the shore of Lake Champlain, along the eastern edge of the Adirondack Park, the Department of Environmental Conservation (DEC) and the New York State Office of Parks, Recreation and Historic Preservation (Parks) manage the Crown Point Reservation, which consists of the DEC Crown Point Campground and the Crown Point State Historic Site. At the northern end of the historic site property, the remnants of Fort St. Frederic (built by the French in 1734) and His Majesty's Fort at Crown Point (built by the British in 1759) are open to the public.

Located on the New York side of the Lake Champlain Bridge, the State Historic Site helps the public interpret the colonial history of this part of New York State. Like much of the land inside the "Blue Line," most of the State Historic Site property has remained intact for many years; it consists of a mixture of bottomland deciduous forest, wooded swamps, meadows, cedar/juniper scrub, and hawthorn groves.

His Majesty's Fort at Crown Point

The National Audubon Society recognizes the Crown Point State Historic Site as an Important Bird Area, as the site provides essential habitat to one or more species of breeding, wintering, or migrating birds. Important Bird Areas generally support high-priority species, large concentrations of birds, exceptional bird habitat, and/or have substantial research or educational value.

Based on the National Audubon Society's Important Bird Areas program, New York State created a model Bird Conservation Area Program (BCA) in 1997. The program, embedded within the State's Environmental Conservation Law, is designed to safeguard and enhance bird populations and their habitats on selected State lands and waters. Most of the State Historic Site was designated as a BCA, which includes a migratory bird concentration site, a diverse species concentration site, and a bird research site.

The BCA is open year-round for the public to view birds on the lake, along the shore, in woodlands, and in grasslands. The Crown Point Site provides habitat for long-term research and monitoring projects that contribute substantially to ornithology, bird conservation, and education.

Lisa Polay

Bird habitat at the Crown Point BCA

The BCA is located at the tip of Crown Point peninsula, jutting northward into Lake Champlain, and bordered on the west by Bulwagga Bay. Hawthorn (*Crataegus spp.*) trees dominate the shrub habitat, which supports the butterfly and moth caterpillars that feed large populations of migrating songbirds each year.

Since 1976, the Crown Point Site has been the location of an annual spring bird banding station. This station, founded by J. M. C. "Mike" Peterson, is operated by the Crown Point Banding Association (CPBA). CPBA is an unincorporated, independent, participant-funded, peer-managed, 100-percent volunteer organization. During the past four decades, the spring bird banding station and associated research efforts have become an important part of Crown Point's history, contributing substantial long-term data on the avian community. According to Gordon Howard, a Master Bird Bander who managed the CPBA banding station for many years, the Historic Site's support is a perfect example of a public/private partnership that provides quality programs for the public.

The CPBA banding work is conducted in cooperation with DEC under a Volunteer Stewardship Agreement. Even during the recent pandemic, the banding work continued with support from State Parks, while following health and safety guidance received from DEC and the New York State Department of Health.

The station provides valuable long-term data on Southern Lake Champlain Area's avian community. Information on each bird that is banded, including species, sex, age, and condition, is sent to the United States Fish and Wildlife Service, which oversees all bird banding in the US. Almost 23,000 birds of 110 species have been banded at this location since the CPBA's founding. Weather information is also gathered to help support interpretation of the bird migration data compiled at the site.

The bird banding work is done under the supervision of Master Bird Bander Ted Hicks, the current CPBA Coordinator and Bander in Charge (who holds the state and federal permits for the work). Birds are caught in mist nets, and a small metal band is placed around their leg.

Collecting banding data

Lisa Polay

Lisa Polay

Bird watching along Bulwagga Bay

Blue jay

Lisa Polay

Lisa Polay

Yellow rumped warbler

Lisa Polay

Releasing a pileated woodpecker after banding

These nets, each 12 meters long and similar in appearance to volleyball nets, are constructed of fine polyester yarn and are designed to minimize bird injuries. With proper use of mist nets by trained banders, less than one percent of the birds caught are injured by the banding process.

In 2021 (the most recent year that final data are available), 496 birds from 54 species were banded during the two-week session. The total number and species count for both are well below the previous ten-year station averages, mostly due to the wet weather patterns throughout the banding session. As usual, yellow-rumped warblers were plentiful with 36 banded, which is not surprising as they are North America's most numerous species, and often are CPBA's most numerous warbler species. However, they were second in number to common yellowthroat (44 individuals) on the warbler species list. Overall, the top five species banded were blue jay (66), gray catbird (59), common yellowthroat (44), white-throated sparrow (38), and yellow-rumped warbler (36).

Banding data collected by the Crown Point Banding Station, along with that collected from other banding stations, can provide important clues to help us understand how factors that impact short- and long-term cycles in bird migration may be related. By knowing where birds are and when, important conservation decisions can be made, such as where, or where not, to locate wind turbine farms, or reducing building lights on specific high-migration nights to prevent the deaths of many birds. It is crucial that these decisions are based on accurate migration models to allow researchers to properly understand behavioral aspects of migration, how migration timing and routes may be impacted by a changing climate or other factors, and to discover if variation in migration timing and population size are linked.

The Crown Point station is one of a few bird banding operations east of the Mississippi that have been in operation for this long. It is the only banding station that is both inland on the Atlantic coast and east of the Great Lakes. In addition to the data on bird populations, the station provides opportunities for the public to engage in these efforts. School and youth groups, homeschoolers, seniors, and special interest groups visit the banding station every year to participate in banding and learn about the importance of the site.

During the past few years, the CPBA has also participated in the Bird Genoscape Project. This project is a cooperative avian genetics project between researchers at the University of California-Los Angles

and Colorado State University to help understand why neotropical migratory birds are declining in the Western Hemisphere. This project involves gathering data to assess where migrants are most limited—their breeding grounds, migratory stopover points, or tropical wintering areas. The CPBA is permitted to remove two tail feathers from individuals of certain bird species, which, along with band number, species, age, sex (if determined), and date of collection is then sent to the project coordinators. CPBA successfully collected samples in 2021 from 303 individuals of 20 species included among the 53 project focus species.

With the diverse mix of habitats found at the Crown Point BCA, DEC and State Parks manage the site to help optimize the bird habitats within the BCA and to keep the site accessible to the public. The dedicated team of Parks operations staff also keeps the grounds maintained to maximize the opportunity for ground-nesting birds by keeping the grasslands unmown until later in the summer. More than 100 acres of the site, including the nearly 40-acre "bobolink field," are not mowed until August to allow birds to raise their young and preserve the grasslands as habitat for current and future generations of birds and bird enthusiasts. Only the areas around buildings, roadways, and historic structures are mowed regularly.

The Crown Point BCA provides the public with an opportunity to observe a diverse population of birds. Ospreys nest in the trees and on platforms near the lake and can be seen fishing throughout the summer. Herons, egrets, and kingfishers patrol the shorelines, and bald eagles are seen soaring over the lake. In the woods, several species of woodpecker (including downy, hairy, and pileated, as well as northern flicker) can be observed, along with numerous species of songbirds.

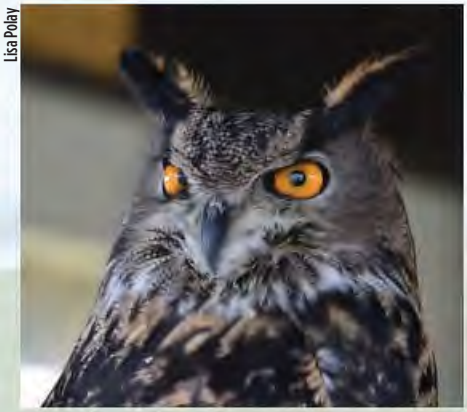
In addition to the bald eagles and ospreys, hawks seen include red-shouldered, rough-legged, sharp-shinned, broad-winged, Cooper's, and red-tailed. Owls include great horned, barred, eastern screech, and snowy. Waterfowl enthusiasts can see bufflehead ducks migrating north in the early spring, following the ice melting off Lake Champlain, wood ducks, blue-winged and green-winged teals, American wigeons, hooded mergansers, Canada geese, and snow geese.

At-risk species historically observed include the American bittern, osprey, northern harrier, red-shouldered hawk, American woodcock, whippoorwill, wood thrush, blue-winged warbler, golden-winged warbler, and prairie warbler.

The bird banding station is typically operated for two weeks in early May. The public is welcome to visit the site to observe the work, and to visit throughout the year to take advantage of the birding opportunities at the Crown Point Bird Conservation Area.

Lisa Polay

Lisa Polay



Two visiting raptors (Harris hawk and Eurasian eagle owl) displayed during a raptor rehabilitation talk at the BCA

Lisa Polay

Visitors learning about bird banding

Kevin Farrar is a retired DEC geologist and a seasonal Parks and Recreation Aide at the Crown Point State Historic Site.

FOR MORE INFORMATION, GO TO:

- Parks page for Crown Point State Historic Site – **parks.ny.gov/historic-sites/crownpoint**
- DEC page on the Crown Point State Historic Site Bird Conservation Area – **www.dec.ny.gov/outdoor/56821.html**
- DEC Birding Page – **www.dec.ny.gov/animals/109900.html**
- List of bird species sighted at the Crown Point BCA – **ebird.org/hotspot/L304736**

Turtle Island Biocontrol

As reported in *How One Woman Saved Turtle Island* (*Conservationist* October/November 2022), hemlock wooly adelgid (HWA) has been identified in Lake George. On October 12 and 13, 2022, infected and vulnerable hemlock trees on Turtle Island and Mohican Island were treated with an insecticide to protect them from HWA for several years to come. Members of DEC's invasive species control team treated 600 trees on both islands. Predators of HWA have been released in the Lake George area, and should eventually make their way to the islands, where they will act as long-term biocontrol.

Construction Begins on New Rail Trail

In November 2022, construction began on the Adirondack Rail Trail, a 34-mile, multi-use recreational path for outdoor adventurers between Tupper Lake and Lake Placid. The work will convert the former railbed into a world-class shared-use path for hikers, bikers, cross-country skiers, and snowmobile enthusiasts. Once complete, the Adirondack Rail Trail will connect the communities of Lake Placid, Saranac Lake, and Tupper Lake. Information on phases of construction, and a public use map are available at: **www.dec.ny.gov/lands/124911.html**.

Sturgeon Recovering

In *Are Dinosaurs Making a Comeback?* (*Conservationist* April/May 2022), it was reported that the population of lake sturgeon worldwide was in severe decline. However, due to the efforts of DEC, it appears that lake sturgeon are recovering in New York State. In late-October 2022, DEC personnel caught, tagged, and released 15 protected lake sturgeon into Cayuga Lake, including a near-record size fish weighing 154 pounds and measuring 77.6 inches long. DEC began its lake sturgeon restoration program in 1993, a decade after the State listed the fish as a threatened species.

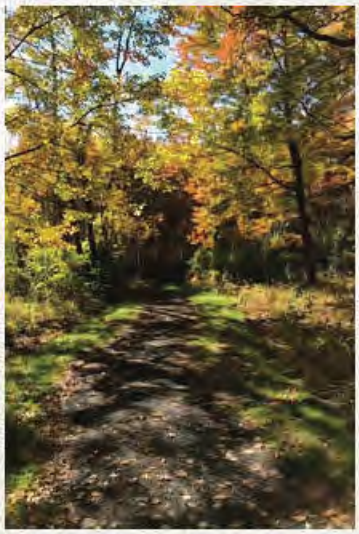
Public Access Restored

DEC recently announced the restoration of public motor vehicle access to the Four Corners Parking Area on Gulf Brook Road in the Boreas Ponds Tract. A severe storm on October 31, 2019 caused significant damage to multiple bridges and culverts along Gulf Brook Road. The temporary bridge installed over LaBier Flow Dam allows DEC to reopen the full length of Gulf Brook Road to both pedestrians and motor vehicles for the first time since the storm. The Boreas Ponds Tract spans almost 20,000 acres across two Forest Preserve management units, the High Peaks Wilderness, and the Vanderwhacker Mountain Wild Forest. For more information about the Boreas Ponds Tract, visit: **www.dec.ny.gov/lands/107504.html**.

Make Your Camping Reservation Today

It's not too early to start planning for your summer adventure—DEC campground reservations can be made up to nine months in advance. DEC operates campgrounds located in the Adirondack and Catskill Parks that offer a wide variety of experiences, including island camping, as well as tent and trailer camping. If you are looking for a full listing of campgrounds, check out the New York State camping guide, or go to **www.dec.ny.gov/outdoor/8299.html**.

New Accessible Trail



DEC recently announced the completion of the Fisher Trail at the Five Rivers Environmental Education Center in the town of Delmar, Albany County. Most of the 0.66-mile trail is constructed in compliance with accessibility guidelines for people with mobility impairments. Other improvements include an elevated viewing platform, several accessible benches along the trail, and two new parking areas. Part of the new trail is on a 35-acre parcel owned by the Mohawk Hudson Land Conservancy. The new Fisher Trail, which is officially open to the public, connects with Five Rivers' other trails, and ends at the Visitor Center. To learn more about the Five Rivers Environmental Education Center, go to: **www.dec.ny.gov/education/1835.html**.

LETTERS

Caught in the Storm

I wanted to share this image with you of a male cardinal enduring a recent snowstorm atop one of our birdfeeders.

JANIE FERGUSON | CAMERON MILLS

Beautiful photo, thanks for sharing! He certainly seems to be doing his best to stay where he was, despite the wind and snow. Male northern cardinals achieve their most brilliant coloration by midwinter, so that they will look their best for the coming spring breeding season. When seen against the snow or evergreens, they are truly one of winter's beauties!

In the Blink of an Eye

I am sending you this photo I took in the city of Rochester of a red-tailed hawk. He happens to have just one nictitating membrane showing in this photo, which I thought was cool. So many times, we discard photos that don't have crisp eyes showing. However, I am always intrigued by this third eyelid.

ELIZABETH MARSHALL

Great shot, thanks for sharing! The nictitating membrane is found in many species of reptiles and amphibians, sharks, birds, and even some mammals. This third eyelid is either translucent or clear, and helps to protect the eye and keep it from drying out, while maintaining sight. Unlike first and second eyelids, which open and close vertically, meeting in the middle, the nictitating membrane moves horizontally across the entire eye.

Tiny Snake

Here is a photo I took of a small snake I found in my garage late last fall. After a few photos, I released it behind the house.

JEREMY TAYLOR | ATHENS

*This is a young DeKay's brown snake (*Storeria dekayi*) that was born in August or September. Female brown snakes give birth to an average of 15 live young during late summer. These small, secretive snakes are most active at night, coming out to feed on slugs and snails. This young snake was likely looking for a warm place to spend the winter.*

Ask the Biologist

Q: On a November hike at Candlewood Hill in Fahnestock State Park, Putnam County, there appeared to be a late season larval hatch going on in a tiny pool of rainwater. Any idea what they are?

PETER COHEN

A: *These appear to be juvenile water springtails (*Podura aquatica*), which is a species of Collembola found throughout North America. They usually live on the surface of slow-moving water, feeding on available decaying organic matter. They're considered very beneficial to their ecosystems and play an important part in nutrient recycling, as well as fish and amphibian food.*

—LIAM SOMERS, ENTOMOLOGIST, FOREST HEALTH DIAGNOSTIC LAB

Missing Stripes

Occasionally, we are visited by a skunk that's all white on the top. Is this unusual? Here he is finding "leftover" sunflower seeds below our bird feeders.

LARRY BARNETT | BALDWINSVILLE

Although not showing on this animal, the striped skunk is named for the two white stripes that run down its back, separated by black in the center. However, it is very common to see striped skunks with varying amounts of black and white on their backs, ranging from mostly white to mostly black, sometimes without the characteristic stripes. Striped skunks also usually have a white stripe down the center of their face, as can be seen in this photograph, although that too is sometimes not present on all striped skunks.

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Back Trails

Perspectives on People and Nature

Confessions of a Maple Syrup Lover

BY TONY COLYER-PENDAS

I love maple syrup. I enjoy it on pancakes and waffles, mixed in with yogurt and granola, and drizzled on ice cream. I'll even drink the remnants straight from the jug, when no one's watching, of course.

This has been a lifelong craving; okay, an addiction. But I didn't grow up with it being so readily available and easily accessible. I grew up in south Florida (see *Back Trails* February/March 2021) and it was only obtainable from the shelves of grocery stores. It wasn't until I moved to upstate New York that my maple syrup knowledge (and obsession) expanded.

My wife and I own five acres in Rensselaer County, and the property contains some maple trees. When we bought it, I remember thinking that I now had an endless supply of maple syrup. However, the trees on our land are silver maples, not sugar maples. After doing some research, I learned that while you can make syrup from the sap of a silver maple, their sap has a relatively low sugar content and the flavor would be unpleasant—imagine my disappointment.

I also learned that harvesting the sap to make maple syrup is ideally done when nights are below 32 degrees Fahrenheit and days are just starting to get warm. I mentioned that I grew up in south Florida, so I don't really enjoy being outside during the cold and I try not to make it a regular occurrence. In addition, I learned that the sap that comes out of a maple tree isn't instantly ready to be poured over your pancakes; there's a process that I knew nothing about.

The sap consists mostly of water, about 98 percent of it is water and only 2 percent is sugar. The sap needs to be boiled to remove the water—it takes about 40 gallons of sap to make one gallon of syrup. You also need to remove any sediment, bugs, or twigs from the sap. Apparently, this is best done with a coffee filter, while any large pieces of debris can be removed with a slotted spoon. The filtering should be done twice, before and after the sap is boiled.

After accepting the fact that making maple syrup from the trees on our property wasn't a realistic expectation, I learned that there are many places where I could buy maple syrup, while also supporting a local producer. Maple syrup can be purchased from a farmstand, a farmers' market, or a local maple syrup maker. Our neighbors make maple syrup from trees on their property, and we've bought syrup from them more than a few times.

With more people interested in tapping maple trees, the Department of Environmental Conservation (DEC) has begun opening some State Forests to tapping for maple syrup production. DEC works with both small and large producers utilizing maple trees on State lands. Often, producers with an existing sugarbush (a forest stand of maple trees for maple syrup production) on adjacent lands will contact DEC and ask if they can tap trees on a State Forest.

If permitted, DEC will enter into a contract allowing maple syrup producers to access State lands and establish the infrastructure necessary to collect sap. These contracts require producers to minimize impacts on recreational use and abide by best management practices (BMPs) to protect environmental resources. These BMPs include restrictions to protect sensitive areas, among others. DEC Foresters will mark the maple trees that can be tapped and decide how many taps a particular maple tree can support.

To learn more about tapping maple trees on a State Forest, go to: **www.dec.ny.gov/lands/84417.html**. Now I'm really in the mood for pancakes, topped with some delicious New York maple syrup, of course.

Tony Colyer-Pendas is an Assistant Editor of the *Conservationist*.

Return a Gift to Wildlife

Return a Gift to Wildlife is the only dedicated source of state funding made available to DEC to explicitly address the needs of all wildlife species. The program funds are typically used to fund high priority projects that improve the management of rare species that either have no other source of funding or to provide required state matching funds for federal grants that do the same.

You can donate to Return a Gift to Wildlife when you file your state taxes. A voluntary contribution line on the state income tax form provides every taxpayer with an easy, simple way to support fish and wildlife conservation. All contributions are tax-deductible on the following year's return.

For more information visit DEC's website at **www.dec.ny.gov/animals/327.html** or use your phone to scan the QR code.

Return a Gift to Wildlife

NEW YORK STATE | Department of Environmental Conservation

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Short-eared owls are the most diurnal (active during the day) of all the northeastern owls. They are most often observed in the late afternoon and at dawn or dusk. These birds primarily eat small mammals, but occasionally take small birds, and the young sometimes eat insects. When hunting, they dive from perches or fly low over the ground and pounce on prey from above, sometimes hovering briefly before they drop. #WildlifeWednesday

Photo by @greggardphoto