



NEW YORK STATE

CONSERVATIONIST

JUNE 2018

BOREAS PONDS TRACT AN ADIRONDACK GEM

BEE HUNTING | FIREFLIES | BLANDING'S TURTLE



Dear Reader,

We are now on the brink of the summer season. If you're like me, after a long winter, I'm sure you are looking forward to enjoying the outdoors.

For those who love to hike, paddle, or both, the opening of the Boreas Ponds Tract to public recreation for the first time offers an opportunity to explore the beauty of lands, waters and rich forests that were held in private hands for more than a century (pg. 13).

It's also a great time to enjoy outdoor experiences with the entire family. Remember warm summer nights when you were young, chasing fireflies in the backyard?

In this issue, you can learn about fireflies and what their signals mean (pg. 17). Or maybe you'll want to plan a trip to the Rogers Environmental Education Center in Sherburne (pg. 24), which is celebrating its 50th anniversary this summer. If you visit, you can explore 600 acres of woodlands, meadows and ponds, learn about our natural world through a variety of outdoor exhibits and events, or hike on six miles of trails.

And don't forget that June 23rd and 24th are free fishing days (pg. 35)—you don't need a license to fish that weekend. It's a great way to try out fishing, and you'll learn why it's such a popular tradition in New York, enjoyed by nearly a million anglers.

For the truly adventurous, you can read about bee hunting: a fascinating tradition that is practiced by only the most ardent outdoor enthusiasts (pg. 6). If you prefer outings that are a little less demanding, visit DEC's Braddock Bay Wildlife Management Area (WMA) on Lake Ontario to view a variety of birds and wildlife (pg. 26), or stop by the Bath Fish Hatchery, whose staff have been raising trout for Finger Lakes' stocking for the past 150 years (pg. 28).

While on your travels, be sure to take precautions for the heat (pg. 21). And keep an eye out for Blanding's turtles (pg. 2) and other turtles as they cross roads to get to nesting areas.

Don't forget to participate in the first annual Outdoors Day on June 9th. DEC and State Parks will offer a wide range of events where anyone, from novice to expert, can try out various outdoor recreation activities. I'm sure you'll discover outdoor opportunities that will become lifelong pursuits.

Finally, I want to remind you of an important step you can take to help others: become an organ donor. Organ donation literally saves lives. New York is urging people to register as an organ donor—it's an easy process and one that can help ensure that everyone gets a chance to enjoy life. Please take a few minutes to register as a donor at <https://donatelife.ny.gov/>.

All the best,
Basil Seggos, Commissioner

NEW YORK STATE CONSERVATIONIST

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Andrew M. Cuomo, Governor of New York State

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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Department of
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BATH HATCHERY, BATH, N.Y.

circa 1910

See page 28

CONTENTS

June 2018 Volume 72, Number 6

- 2 Blanding's Turtle**
Conservation efforts for one of NY's rarest turtles
By Glenn Johnson and Angelena Ross
- 6 Deep Forest Bee Hunting**
A new twist on a New York tradition
By Robin W. Radcliffe
- 13 Paddling Boreas**
Newly opened property a true Adirondack gem
By Phil Brown
- 17 Twinkling Gems of Summer**
New York's fireflies
By Cole Gilbert and Jillian Ditner
- 21 Don't Get Beat by Summer Heat**
By Asante Shippilits and Seema Nayak
- 24 Rogers Environmental Education Center**
Celebrating 50 Years
By Ann Harrison
- 26 Braddock Bay Wildlife Management Area**
Diverse habitats support a bird haven and outdoor recreation
By Heidi Kennedy
- 28 Bath Fish Hatchery**
By Ken Osika



DEPARTMENTS

- | | | | |
|-----------|---------|-----------|-------------|
| 30 | Briefly | 34 | On Patrol |
| 32 | Letters | 36 | Back Trails |

FRONT COVER: Boreas Ponds by Carl Heilman II

BACK COVER: Fireflies (time-lapse) by Pete Mauney



BLANDING'S TURTLE

— Conservation efforts for
one of NY's rarest turtles

By Glenn Johnson and Angelena Ross

I had just loaded my kayak onto the car and was headed out for a paddle after work. It was late August and I was beginning to feel the intensity of the field season fade. We had just about wrapped up a busy season of trapping turtles, watching turtle nesting areas to find new nests, and documenting road crossings and mortalities. I was worn out and ready for fall to set in, yet I still wanted to embrace the last warm days of summer on my off time. It was in the high 80s and sunny, so it felt very much like mid-summer. I tightened down the kayak and I left my driveway.

Five seconds after my vehicle reached cruising speed, I spotted a smooth dome in the road ahead—a possible Blanding's turtle. I pulled the car to the right and eased on the brake as I passed the small object. I looked in front and behind me to verify that the coast was clear and turned around. As I approached the object, I realized that it was indeed a small female Blanding's turtle. She was sitting on the roadside watching me as I drove towards her. It was a country road with little traffic, so I safely parked the car and ran out to grab her. She was completely motionless with her head held high as if she were standing her ground. Her chin and throat were a dazzling golden-yellow and her black dome was shining like a wet rock. She remained motionless until I snatched her up—fingers on her carapace (top shell) and thumbs on her plastron (bottom shell), like a sandwich—and she instantly became a flurry of flailing limbs in my hands. I was elated that I had just discovered a new location for Blanding's turtles; however, I was slightly disappointed that my paddling trip would now be postponed until after I tagged and measured the pretty little lady.

I ran back to the house for a cooler, placed her inside, made a phone call to my co-author, and headed to the lab.

— Angelena Ross



Angelena Ross

With hard shells on their tops and bottoms, turtles are instantly recognized and often loved by many. However, according to the International Union for the Conservation of Nature, turtles as a group (comprised of about 320 species) are declining worldwide, faster than nearly every other vertebrate group. Threats include widespread habitat loss, fragmentation of habitats by roads and agricultural fields, and exploitation for food and the pet trade.

Michael Jones

In New York State, there are 12 species of native turtles (excluding four species of sea turtles that sometimes visit our waters), as well as two non-natives that breed here now. One species, the Blanding's turtle (*Emydoidea blandingii*), is second only to the diminutive bog turtle as the most threatened in the state.

Blanding's turtles are medium-sized, semi-terrestrial turtles that can live up to 80 years or more. Despite their long life-expectancy, they have become imperiled. One reason for this is the slow rate of reproduction. Females do not become sexually mature until they reach about 20 years of age, and the number of eggs laid is lower than other similarly sized turtles. Add in the fact that as many as 90% of the nests that Blanding's lay each year are either destroyed by predators such as skunks and raccoons, or are otherwise not viable (i.e. the eggs die) because they are laid in agricultural fields where the eggs get shaded out as the crops grow high, and this means it can take a female turtle her entire life to replace herself.

Another problem facing the Blanding's turtle is habitat destruction through development, which began with European settlement, and draining or filling of wetland areas. In addition, many turtles are killed on roads that cut across migration routes between the wetland areas where the turtles live and their nesting areas.

For most of the year, Blanding's generally spend their time in the pools and channels found in wetlands dominated by shrubs, such as willow and buttonbush. Here they look for minnows, snails, crayfish and insect prey, and seek out each other during the spring mating season. During winter, they burrow down into the soft muck under the shrub hummocks. In early summer,

however, the females leave the wetlands to deposit their eggs in open upland sandy areas where the eggs will be incubated by the sun. Since this often requires the adults to cross roads, they are at risk of being run over by a vehicle. The same is true for males and young individuals; recent studies have shown these turtles spend significant time wandering across the countryside.

When you combine these factors, it's evident these threats can lead to local population extinction. In some areas of New York, there is little evidence of any successful recruitment of young turtles into populations. Hofstra University turtle biologist Dr. Russell Burke refers to these populations as "zombie" (living dead) populations.

To reduce losses to Blanding's populations, researchers are conducting conservation efforts in each of the four regions these turtles inhabit in the state. In Western New York, where Blanding's turtles are thought to be limited to only one or two locations, biologists remove turtle eggs from wild nests and incubate them in captivity in an effort referred to as "head-starting." The hatchlings are then raised for up to two years before being released back into the wild. In Dutchess County, researchers are employing both head-starting and wetland restoration. Erik Kiviat from Hudsonia, a non-profit environmental research institute, and retired DEC herpetologist Alvin Breisch, both have a long history of leading conservation efforts there. NY's Natural Heritage Program Environmental Review Specialist Andrea Chaloux is conducting intensive trapping efforts in the Saratoga region to document the size and extent of a recently discovered population. Land protection is the priority measure there, as residential development is occurring at a rapid pace.

Michael Jones



Predator guards, such as solar-powered electric fencing, protect nesting turtles and nests from would-be predators like skunks.



Newly hatched Blanding's turtles

Species Spotlight:

BLANDING'S TURTLE

(*Emydoidea blandingii*)

COOL FACTS:

- Medium-sized with a shell length of 7 - 10 inches
- Has a bright yellow chin and throat, and a domed shell
- Agile and a good swimmer
- Sometimes called the “semi-box” turtle because while the plastron (bottom shell) is hinged, it does not shut as tight as a box turtle’s
- Timid; when near water and alarmed, may plunge into water and remain on the bottom for hours
- Nests in early summer; buries eggs in upland sandy areas; clutch size ranges from 5-12 eggs
- Can live up to 80 years
- Threatened in New York State



Michael Jones

Plastron (bottom shell) patterns of two adult Blanding's turtles

The largest populations of Blanding's turtles are scattered across Jefferson and St. Lawrence counties in northern New York. These counties are among the least human-populated in the state, yet even here, the turtles can suffer high rates of road mortality and nest predation. To combat this, biologists have introduced several measures, including putting a barrier along the road of a known migration route to keep turtles off the road surface. Likewise, installing an “ecopassage” under a busy roadway also does the trick. These are both expensive undertakings, however, so care and forethought must be used to select sites that will best benefit turtles and other wildlife.

Tom Langen at Clarkson University worked with the New York State Department of Transportation (DOT) and other stakeholders to install a long series of fences on a busy causeway (road with wetlands on either side) that bisected state lands and experienced heavy roadkills. The reduction in roadkill of frogs and turtles was both immediate and significant. At another hotspot location of Blanding's turtle movement, DEC installed a large box-type culvert under the road and used fencing to funnel animals to the crossing. Camera trap monitoring at the site shows a great diversity of wildlife use the crossing, including turtles.

To increase driver awareness, DOT installed turtle crossing signs at multiple locations in northern New York (and elsewhere) identified as high-use areas for turtle crossings. For some species, these hotspots are typically found on causeways where turtles routinely cross roads to travel between patches of suitable habitat, or use the roadway margins as nesting habitat. However, Blanding's turtles wander around the uplands more frequently than other turtles, making it more difficult to predict areas of high use. Nonetheless, wildlife experts have identified locations female turtles regularly cross as they move from their home wetlands to traditional nesting sites.

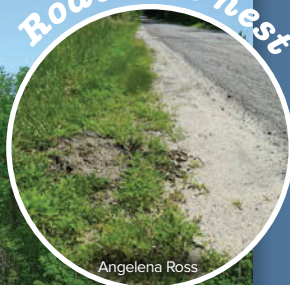
SAFE CROSSING

Road mortality is one of the biggest threats to turtle populations, as each year motorists encounter turtles crossing the road. When turtles become startled in a roadway, they tend to retreat into their shells and stop moving. While this may protect them from some predators, their shells are no match for a vehicle.

If you spot a turtle in the road and want to help it cross, be sure to follow these safety precautions:

- Never stop unless you can safely pull off the road to get out of your car; be sure your car doesn't unintentionally force other vehicles to swerve into the path of the turtle.
- Move the turtle out of the roadway **in the direction it was heading**, even if there is an obvious wetland on the opposite side of the road.
- For a large snapping turtle, it might be best to grab its tail and swiftly drag it across the road to avoid being bitten; never pick up a large snapper by the tail as it can damage its spine.

Roadside nest



Angelena Ross



Glenn Johnson

Jon Ashley



Researchers set trap nets to capture and identify the presence of Blanding's turtles in a location.

In areas where ecopassages and barriers are not feasible, another strategy for protecting turtles is to create potential nesting habitat in places that don't require turtles to cross roads or travel long distances. DEC and SUNY Potsdam scientists are currently doing that, as well as restoring historic nesting sites, at several locations in northern New York. At one large site near the St. Lawrence River, the New York Power Authority created a large nesting site designed to attract Blanding's turtles and keep them from crossing busy roadways. DEC is also returning a large cornfield back into a mix of open nesting habitat, vernal pools, and grassland bird habitat. In addition, researchers are experimenting with several forms of nest protection, ranging from intensive surveys of nesting females followed by installation of predator guards, to the use of solar-powered electric fences around known nesting habitat to ward off predators.

Blanding's turtles are species of concern in nearly every state and Canadian province where they occur, and have become the focus of conservation efforts throughout their range. In the Northeast, wildlife agencies and researchers in five states (NY, MA, PA, NH, and ME) have joined forces to develop a regional conservation strategy that includes site-specific management plans for this species. The goal is to ensure sustainable populations of Blanding's turtles last well into the future, which will also benefit the entire ecosystem.

For more information on Blanding's turtles, including a link to the recently released Conservation Plan for Populations of the Blanding's Turtle, visit DEC's website at www.dec.ny.gov/animals/7166.html.

SUNY Potsdam Biology Professor **Glenn Johnson** is co-author of *The Amphibians and Reptiles of New York State: Identification, Natural History and Conservation*. Senior Wildlife Biologist **Angelena Ross** works in DEC's Potsdam office.

STAFF PROFILE

Angelena Ross—

Wildlife Management is Music to Her Ears

By Conservationist Staff

How does a prospective music major from Amsterdam, NY, wind up earning a degree in Environmental and Forest Biology and then pursue a Ph.D. in Interdisciplinary Bioscience and Biotechnology?

For Angelena Ross, it involved finding the "right fit" and a eureka moment that steered her to wildlife conservation in New York, via Arizona. Angie initially planned to earn a degree in music, specifically the flute, but changed her mind and major to focus on geology and biology. During a class trip to Florida, she met a group of biologists from Arizona doing fieldwork capturing and studying animals. Angie's response: "How do I sign up?"

The next step was a summer internship at Arizona Game & Fish, capturing and banding ferruginous pygmy-owls and northern goshawks. Years later she earned a master's degree from SUNY-ESF, focusing on spruce grouse conservation, and in another fortunate discovery, got a canvass letter about a job at DEC. Three weeks later, she began working for the agency; 11 years later, she's still here.


Angie's philosophy is engaging—she believes "attitude is everything." At DEC, she has worked on a spruce grouse recovery program, managed Blanding's turtle nesting habitat, and designed a chorus frog survey to determine steps to protect this species.

Angie is proud to pass on knowledge she has acquired over the years. Part of the knowledge, which she likes to share when encouraging young people to explore wildlife fieldwork, is this: "more than anything, have a positive attitude and take ownership of your work." She follows that philosophy too, Angie enjoys the outdoors, both at work and play, including hiking in bogs and other less traveled areas. And she recently completed her Ph.D. dissertation.

Although her original plans to pursue music changed, this ardent environmentalist is happy with her career choice. She loves looking at problems and designing solutions, and working with seasonal technicians in the field. And, she still finds time to play the guitar and flute nearly every day.



Michael Jones

A photograph of a wooden box, likely a beehive, with a brass hinge. Inside the box, a honeycomb is visible with several bees and a wasp. The background is a yellow honeycomb pattern.

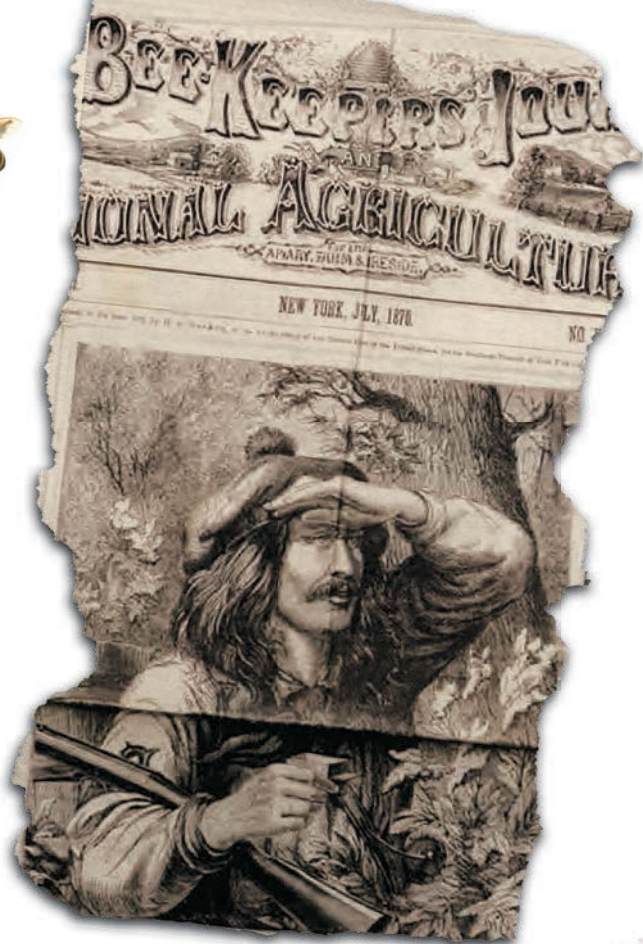
DEEP FOREST BEE HUNTING

A new twist on a New York tradition
By Robin W. Radcliffe
Photos provided by author

The Bee Hunter

The bee hunter was a legendary character of the American frontier. His line of work—finding wild honey bee colonies to rob their golden stores—was in its heyday during the first half of the nineteenth century. In 1852, the age-old tradition of bee hunting began a slow demise, when the Reverend Lorenzo Langstroth patented his moveable frame hive, a revolution that quickly advanced beekeeping using wooden boxes. About this time, American essayist Washington Irving met a bee hunter in the forests of New York:

We had not long been in the camp when a party set out in quest of a bee-tree, and being curious to witness the sport, I gladly accepted an invitation to accompany them... At length down came the tree with a tremendous crash, bursting open from end to end, and displaying all the housed treasures of the commonwealth. Every one of the party now fell to, with spoon and hunting knife, to scoop out the flakes of honey comb with which the hollow trunk was stored.... Every stark bee hunter was to be seen with a rich morsel in his hand, dripping about his fingers, and disappearing as rapidly as a cream tart before the holiday appetite of a schoolboy.



Wisconsin Beginnings and a New York Homestead

I was nine years old when my grandpa made me a beehive. It was the size of a few slices of bread, with a single compartment, a sliding glass lid and a long pole used to raise it above meadow flowers. And there was the little magic bottle, too—a tiny jar of anise oil that grandpa told me held the secret ingredient to finding a bee tree. Our first bee hunt led us along the steep bluffs and cliff faces of Gullickson's Glen, a natural area with thousand-year-old pictographs etched on sandstone walls. Not far from the rock art, we found a wild colony of honey bees in a fissure of a towering white pine.

Years later we moved to the Finger Lakes region. A ring of forested lands, not unlike an emerald necklace, encircle the longest lake of this glacially-cut fingered hand. An 1890

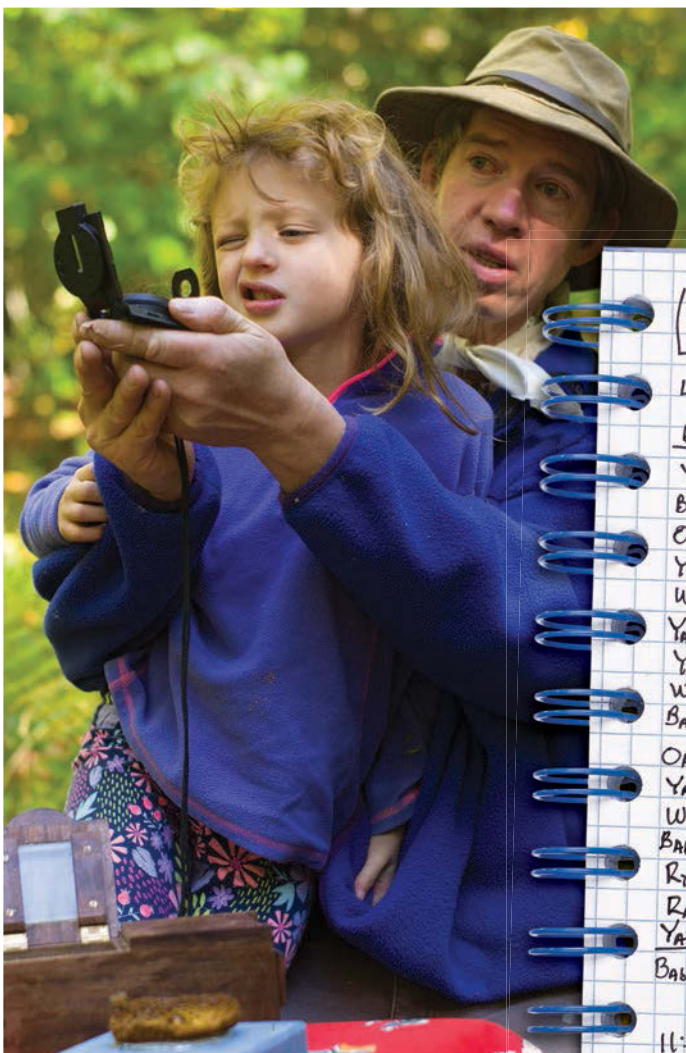
homestead nestled beside the Shindagin Hollow State Forest held our fascination and we got to know its owner, a resilient lady named Lillian Robbins. From the age of seven, Lillian had only known the big white farmhouse with its red gambrel barn as home. With its distinctly New England charm, the home collects its water by gravity from the surrounding hills, giving meaning to Shindagin's Iroquois name of *rapid waters*. At 93, Lillian still chopped her own firewood for the cook stove and shoveled her own walk. Lillian's homestead was the lone survivor of a Depression-era land reacquisition program. Eventually, Lillian sold us her farm and only asked that we "ready the bluebird houses" each spring ahead of the arrival of her favorite migrants.

The Tenet

From the farmhouse steps, right outside our front door, the land drops steeply into rugged canyons. The ancient path of the Onondaga Indian Trail is still visible in places. The connection to Native Americans reminded me of my Wisconsin days, hunting bees with my grandfather. With a renaissance spirit, I handmade my own beehive and began bee hunting on our farm. It all began with a simple tenet:

In a single summer, I would discover all the beelines arising from my farm and follow them to their bee trees.

To find a wild colony of honey bees, the bee hunter must follow a path of flying bees to their hive. A bee is first trapped from a flower in a wooden box with a hinged lid. The bee hunter pours sugar syrup into a honeycomb feeder in the box, and after the bee fills up, it flies from the box on a *beeline* back to its tree. Some bee hunters paint their captives with brilliant dots of color, which help them decipher the time it takes for a particular bee to fly to the tree and back, providing an estimate of the distance to the bee's nest.



Above: The author and his daughter take a compass reading of the direction in which the bee flew.

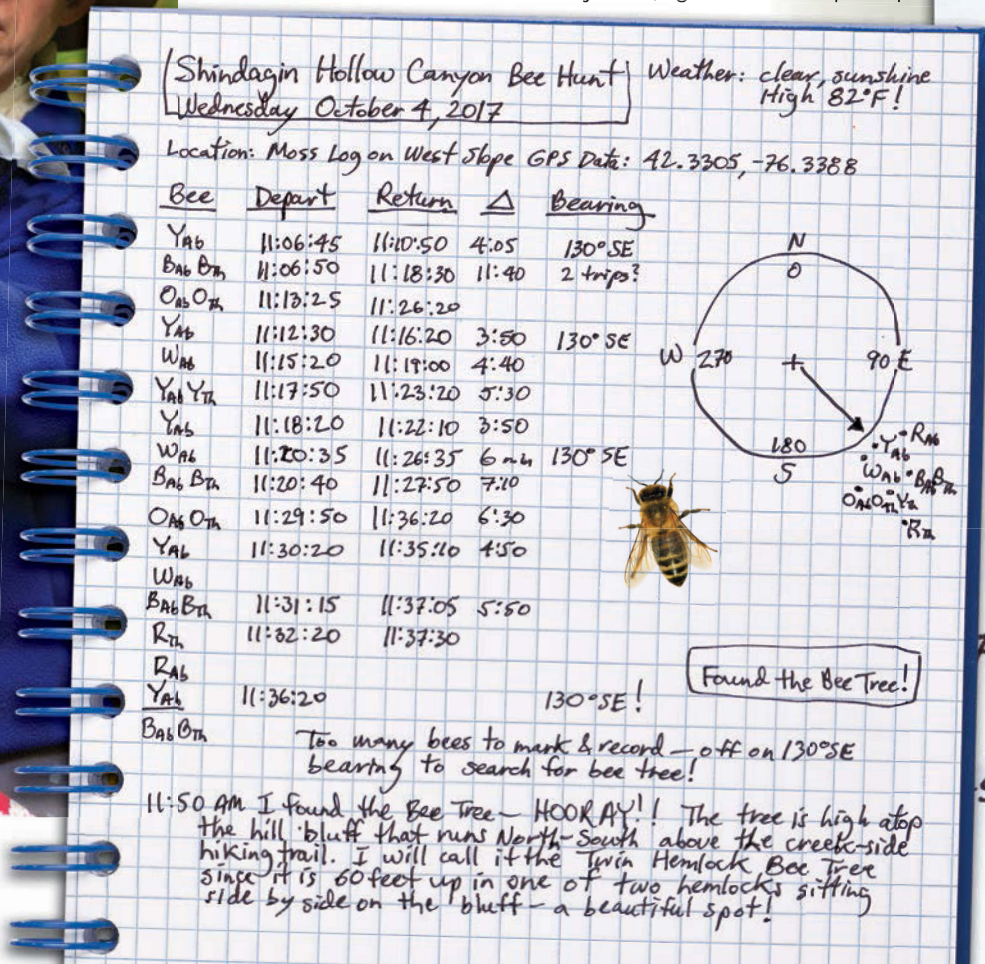
The Lost Bee Tree

My first beeline led me into the hills above our farmhouse. I followed bee after bee through tall grass until I came around the corner of a hewn log cabin where bees plunged into a boarded-up window. The next hunt took my daughter and me into a mature forest that had been logged the year before. We chased bees down winding logging trails and set our beehive upon broad stumps of hemlock, maple and beech. The effort paid off. We found a bee tree in a great hemlock atop a rugged knoll.

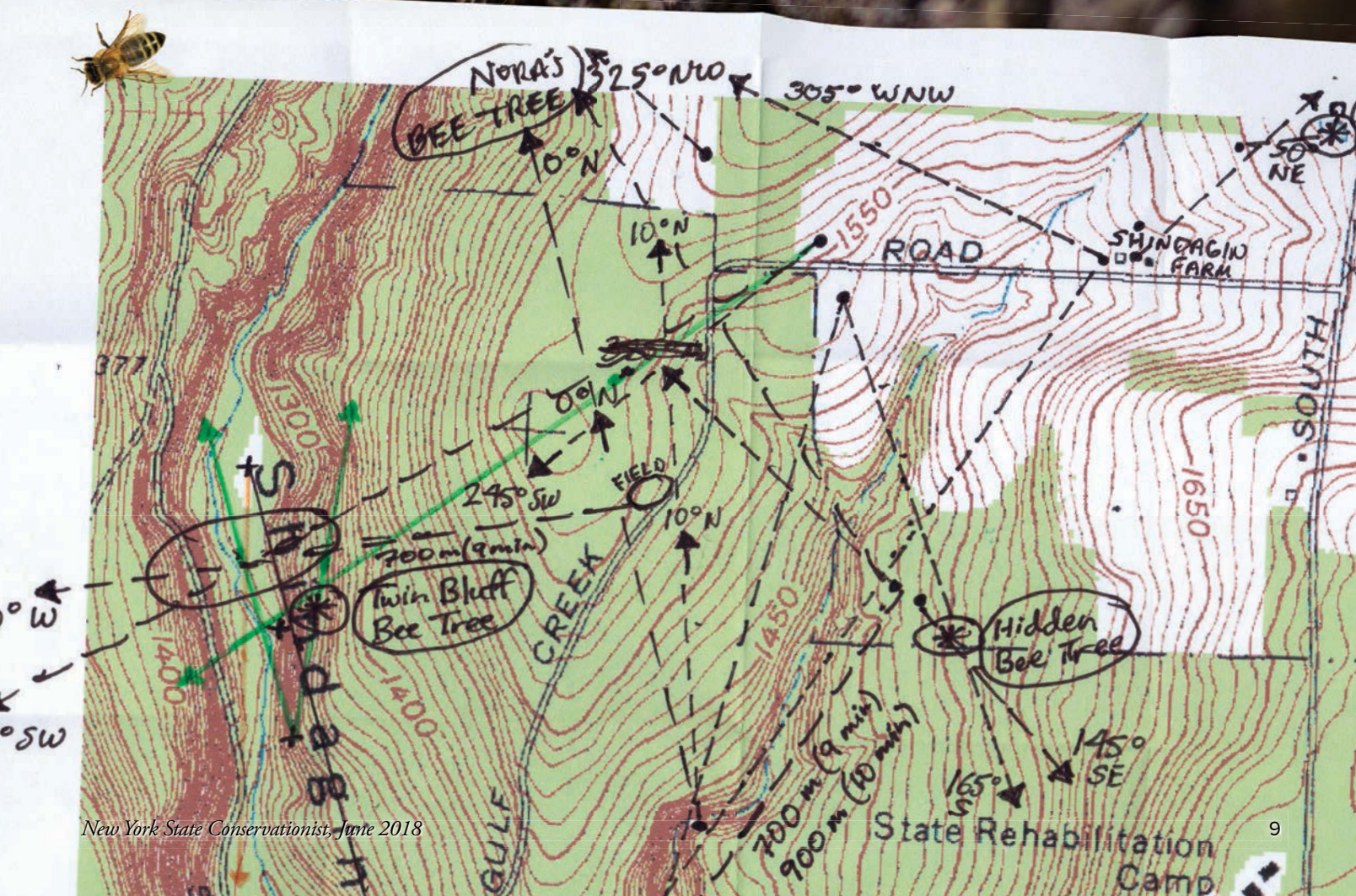
I followed bees all summer long until I came to the edge of the deep forest. Here my bee hunting came to a standstill.

As soon as I moved into the forest, one by one the bees simply spiraled up and out of sight. Days later I found them foraging back in the field. Discouraged, I sat down and looked at my meticulous notes and the lines I had drawn on the map of Shindagin. I noticed an emerging pattern to my beelines: invariably the bees drew me to the steepest terrain on the map. The biggest trees grew on steep slopes that pioneer loggers could not reach. I timed my painted bees from the open field to what I affectionately called the *Lost Bee Tree* at 8 minutes, with a consistent compass bearing of 219° to the southwest. Following a hunch, I hiked in the direction of the "missing" tree until I reached a spot 800 meters along the high bluff. I scrambled up and down the sheer slopes, and saw flowers underfoot.

Below: Bee hunt journal; right: Bee hunt topo map



“In a single summer,
I would discover all the
beelines arising from
my farm and follow
them to their bee trees.”



And there were the bees! I trapped a single bee and then more until I had six bees in my box. I fed my new recruits sweet anise-syrup and let them go. I waited. Only the distant hammering of a pileated woodpecker could be heard. Then the staccato was broken by a buzz, and another buzz. The bees were back. I had painted the bees in orange, red and blue, and “Blue Bottom” soon held my attention. While the other bees circled up through the tangle of branches, Blue Bottom flew straight across the valley. She zoomed there and back in just two and a half minutes, so I knew the bee tree was near.

Two dreary days passed without a trace of the tree. Each morning, Blue Bottom waited for me to pour the sweet syrup into the empty beeswax comb. On the third day, the skies cleared. I climbed the canyon wall to the very spot that Blue Bottom had indicated by her speedy flight and arrowy path. From my precarious spot on the uphill side of a giant hemlock, needing a rope to go up or go down, I looked up through the branches of a hemlock to see the telltale dancing of light off a hundred glistening wings. Sixty feet up and concealed behind a large crotch in the upper reaches of the hemlock, the bees zipped in and out of their treetop home.



Twin Hemlock Bee Tree and Elisha Gallup's Lesson

In late September, honey bees are impatient; some might even say reckless. But this is a magical time for bee hunting. Earlier in the summer I had discovered a single beeline that led far into Shindagin. The bee's home was so far away that I had watched the bees disappear to the west and never return. The mysterious bee tree concealed somewhere deep in the forest had haunted me all summer. And I knew this final goal for my bee hunting summer would stretch the very limits of my skill, patience and bee hunting knowledge. This was *deep forest bee hunting*.

By now I had a newfound bee hunting rule-of-thumb: for every 100 meters a bee must fly to her tree, a minute will pass before she returns to the bee hunter's box. I marked a new line on the topographic map. The beeline pointed me, as it had each time before, to the state natural area, where a creek carved its way through a limestone canyon. The bluffs were spectacular, towering more than 200 feet above the valley floor.

I hiked down the steep path that led into the most rugged spot on the map. The hemlocks were so big I could scarcely reach halfway around their middles, and their tops vanished high above my head. After scouting for likely bee trees, I came upon a haphazard grove of overgrown apple trees—the remnants of an old homestead. I feared I was too late in the season. The goldenrod and purple aster had withered to brown. A single honey bee dithered from plant to plant. The bee departed and then returned. For the

“And I knew this final goal for my bee hunting summer would stretch the very limits of my skill, patience and bee hunting knowledge. This was *deep forest bee hunting*.”



longest time I puzzled about the work of the industrious bee. Then I spotted her sipping water from glistening drops of dew. I trapped this bee and one other in my beehive. Just one taste of the sweet syrup and the impassioned bees were mine.

On the edge of an old logging trail cut into the hillside, one bee came back to me in 1 minute and 55 seconds, a record short time for one of my bee hunts. Since it takes the average honey bee 2 minutes to offload her cargo at the bee tree—regurgitating nectar to a food-storer bee and racing back to depart through the entrance—I knew I must be very near the bee tree. But bees flew to my right and left, and not in a straight line.

As September moved into October, I accepted that I may never find the tree. The bees were piling up in three layers in my box in their frenzy to drink the anise syrup. It was amid this chaos that I noticed something peculiar: returning bees were dive-bombing down to the station from high above, not unlike a squadron of tiny fighter pilots. In a boomerang arc, their hooked flight path swept from high on the bluff above to the sweet syrup below. These “boomerang bees” would soon lead me to the tree.

The old bee hunters knew better. A century and a half earlier, in July of 1868, the quick-witted Elisha Gallup shared his knowledge of bee hunting in the deep forest with a curious reader in the *American Bee Journal*. As I studied his account, I felt as if Elisha the bee hunter was speaking to me across three generations:

The old saying is that bees always go in a direct line to the tree; but that is not always so. They do not fly in a straight line against a strong head wind [sic], but tack right and left, the same as a ship at sea with a head wind. In your case of finding a swarm up the mountain, they tacked to the right and left, and so confused you. You should have got a strong line of bees coming to one spot, and trapped them in a box. Then moved directly up the mountain with them, and let them out slowly waiting till they formed a line. If they still confused you, conclude that the tree is still higher up. Proceed again as before, and when you have got as high up as the tree, or higher, the bees will go in a direct line to the tree.

Grandfather's Tree

I finally found that bee tree. I had carried my beehive beneath the same pair of towering hemlocks a dozen times, but today I lingered, looking through the upper reaches of those twin denizens of the forest. Then I saw the streaming trail of bees coming and going. With no fellow bee hunter to share the jubilant moment, I simply hugged the great tree. A sense of deep accomplishment enveloped me and I found myself returning to the days of bee hunting with my grandfather. I was back on that cold Wisconsin winter day where smoke billowed up in long wisps from beside the towering white pine. Our entire family had gathered beside the tree, and we worked quickly to cut out the treasure inside. Dozens of drunken bees buzzed around us and crashed into the snow. We were there to cut down our bee tree and claim our prize.

I still have fond memories of that day: the sweet taste of honey oozing from broken combs, the pungent smell of pine wood smoke, the gurgling of the ice-choked stream, and the buzzing excitement of the bees. That day I got my first glimpse inside the workings of a honey bee colony, the wisdom of which I still cannot fully comprehend.

I picked myself up from beneath the twin hemlocks and walked out of the forest. I knew I would not be coming back to those Shindagin bee trees yielding fire or axe, as we had so many years before, but rather I'd return with compass and notebook to learn about the marvelous world of the honey bee.

Robin W. Radcliffe is a professor and wildlife veterinarian who directs the Conservation Medicine program at Cornell University's College of Veterinary Sciences.



CELEBRATE OUTDOORS DAY

Explore Outdoor Recreation
in New York State
JUNE 9th

DEC and the NYS Office of Parks, Recreation and Historic Preservation invite people of all ages to participate in numerous events and adventures being offered on Saturday, June 9th as part of New York's inaugural Outdoors Day.

Participants will be able to discover new skills and try out a host of introductory outdoor recreation activities such as fishing, paddling, hiking, biking, bird watching, archery, nature photography, camping and more. Adaptive equipment and opportunities will be available at select locations. These family-friendly events will run from 10:00 AM to 3:00 PM at various DEC sites and State Parks, with programs and demonstrations scheduled at specific times.

Most activities will be guided, though some may be self-guided. Not all locations will have every activity, so check out the Outdoors Day webpages at www.dec.ny.gov/outdoor/113380.html and www.parks.ny.gov to find a list of sites and specific activities being offered. Activities and demonstrations are free. (Note: Normal admission fee still applies at State Park facilities.)

Outdoors Day in New York coincides with National Get Outdoors Day, and is a great way for beginners and others to learn about recreation opportunities, explore nature, and experience adventure close to home and across New York.



Department of
Environmental
Conservation

Parks, Recreation
and Historic
Preservation

Paddling **BOREAS**

Newly acquired property a true Adirondack gem

By Phil Brown



I have spent many days enjoying the outdoors—on foot, on cross-country skis, on my mountain bike, and in my canoe—but I count my paddling excursion on Boreas Ponds as one of my most memorable outings.

Boreas Ponds sits on the edge of the High Peaks Wilderness, offering a spectacular panorama that includes Mount Marcy and much of the Great Range. You won't find a more magnificent vista from your canoe unless you lug it to the top of Marcy itself.

Until last year, it was a view enjoyed by only a privileged few. However, New York State purchased Boreas Ponds and some 20,000 surrounding acres last spring. It was the last phase of a multi-year transaction with the Adirondack Chapter of The Nature Conservancy that added a total of 65,000 acres of former Finch Pruyn timberlands to the Forest Preserve—lands that had been off limits to the public for more than a century.

Although Boreas Ponds can be reached by a former logging road, as of this writing it is uncertain how far the public will be allowed to drive into the tract. When I did my trip in early June last year, the entire road was closed, but I was so eager to see the fabled ponds that I carried my lightweight, 12-pound canoe to get there.

I camped near LaBier Flow, a dammed section of the Boreas River, and the next day launched my canoe in a bay at the foot of Boreas Ponds. Boreas Mountain, whose summit is nearly 4,000 feet, loomed far above the water, an impressive enough sight. When I paddled out of the bay, I was treated to a breathtaking vista of the High Peaks.

Except for some loons, I had the place to myself. Boreas Ponds was once three separate ponds linked by wetland streams. They were joined when a dam, originally built for logging, raised the water level, but the three main lobes are still called First, Second and Third Ponds. Although Boreas Ponds is only a mile and a half long, I made the most of it, paddling a circuit that traced the shores of all three lobes.

When I got to the far end of Third Pond, I carried my canoe over another logging road and relaunched it in the inlet stream, a narrow, winding stretch of the Boreas River. Passing through a grassy plain, I flushed a few ducks and spied two Canada geese hiding in the vegetation, peering at me. Geese are considered pests in the town where I live, but in their natural element—the wild—they are beautiful birds.

After three-quarters of a mile, the stream became too shallow to continue. On a later day, I would return to the area and hike to a remote and charming pond where the Boreas River starts. On this day, however, I was content to return to Boreas Ponds and complete my circuit, happy to have explored the upper reaches of one of the Adirondacks' wildest rivers.

John DiGiacomo



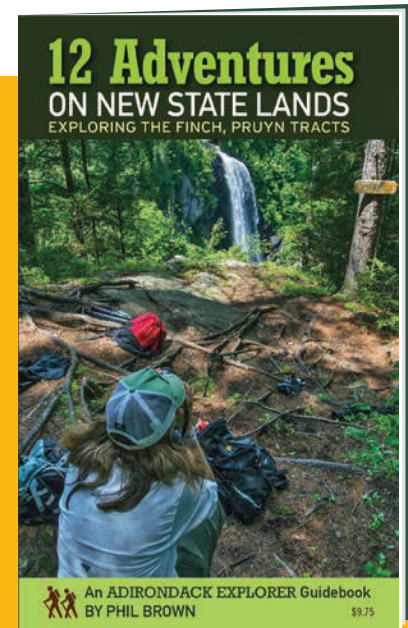
Boreas Ponds is just one of many natural gems on the former Finch Pruyn lands acquired by the state. Recreational opportunities abound on these lands, including hiking, skiing, canoeing, mountain biking and rock climbing. Following are four outings to acquaint you with our newly acquired Forest Preserve parcels.

Essex Chain Lakes—Located south of the hamlet of Newcomb, the Essex Chain comprises eight ponds surrounded by pristine mountains. You reach them by paddling across Deer Pond and then carrying or wheeling your canoe a half-mile to Third Lake, the biggest lake in the chain. From Third you can paddle up the chain as far as Seventh Lake without getting out of your boat. DEC plans to create a carry trail to Eighth Lake. Heading in the other direction, you can paddle to the far end of Second Lake and then reach First Lake by a brief carry. Be sure to paddle down First's outlet—it's wild and serene.

OK Slip Falls—Located in the Hudson Gorge Wilderness, OK Slip is one of the largest waterfalls in the Adirondacks. You can view the falls by hiking (or skiing) three miles along easy, marked trails from State Route 28 to a lookout ledge, where you can ponder the thunderous power of this 250-foot cataract. Where does the name come from? Loggers would yell "OK slip" as a warning when releasing logs from nearby OK Slip Pond to flow downstream to the Hudson.

Upper Hudson Ski Loop—DEC used old woods roads to create a 4.2-mile lollipop loop for cross-country skiing and snowshoeing near the confluence of the Hudson and Goodnow Rivers. Visitors will need to get off trail for close-up views of the rivers. Beginning skiers with some experience should be able to handle the few downhill. The trail is open to hikers in other seasons, but mountain biking is not allowed. DEC plans to create additional trails to connect the loop to the hamlet of Newcomb.

Pine Lake—This beautiful, wild lake lies south of the Essex Chain on the opposite side of the Cedar River. It can be reached from Indian Lake by a four-mile mountain-bike ride on old logging roads. If DEC builds a bridge over the Cedar (as planned), you will be able to continue riding to the Essex Chain. On the way to Pine Lake, visitors can take a short side trip on a hiking trail to Clear Pond. Bikes are not allowed on the trail.



For more details on these and other recreational opportunities, check out *Adirondack Explorer's* new guidebook, entitled *12 Adventures on New State Lands: Exploring the Finch, Pruyn Tracts*, which includes driving directions, trailhead GPS coordinates, color photographs, and maps hand-drawn by a local artist. I hope the book will inspire you to visit these magnificent public lands.

John DiGiacomo

Outdoor enthusiast **Phil Brown** has made a career of exploring the woods, waters and mountains of the Adirondacks, and sharing his experiences with others. Recently retired as Editor of the *Adirondack Explorer* newsmagazine, Brown wrote a series of guidebooks on short hikes near Old Forge, near Lake Placid, and near Keene Valley. For more information on this series and other Adirondack guidebooks, visit www.adirondackexplorer.org.

Hiking BOREAS PONDS TRACT

By Karen Williamson; photos by author

We were late. It was now afternoon on a cloudy, misty fall day, and we were at the car having lunch—lunch we'd expected to be eating on the trail.

It was early October, and my husband and I wanted to see the recently-acquired Boreas Ponds Tract in the Adirondacks for ourselves. We'd heard the ponds were amazingly beautiful, a true gem. As a photographer, I was willing to chance the cloudy, misty weather, since fall colors can be very intense in those conditions.

Our first mistake was failing to print out the DEC online map of the area, although we did have a general map with us. Our second mistake was thinking the first gate we came to meant we could drive no further along Gulf Brook Road, a dirt road. When we came to another parking area after walking a bit, we realized our mistake and returned to get the car.

We drove to the last parking area on the road where a locked gate closed off the road ahead, indicating where the trail to the ponds began. By now it was mid-afternoon, much later than we prefer to start a hike.

Originally constructed by Finch Pruyn as a logging road and upgraded to a four-season access road to their lodge in the 1990s, Gulf Brook Road is smoother than the average logging road. The walking was fast and easy, and we made excellent time.

Just as we arrived at LaBier Flow, in late afternoon, the sun began to break through the clouds, illuminating the fall colors reflected in the flow and the distant mountains. A photographer's dream!

After taking a number of photos, we continued on to the Boreas Ponds, just about a mile away. They were more beautiful than I expected. Of course, it didn't hurt that just as we got there, the clouds parted and the sun came out for good. Peak fall colors reflected in the still waters, with the High Peaks as a backdrop. A lone paddler crossed the pond in the distance. Across the road, the outlet stream tumbled over rocks, framed by gold leaves illuminated by autumn sunlight. We relaxed on the dam, enjoying the view and had a snack. But it was now pushing 5:30, so we started back the way we came, not wanting to actually use the headlamps we had with us!

We walked back to the car in the fading sunlight, stopping again at LaBier Flow for more photos. I thought the first photo stop was good, but the second was even better. Once again we made good time, arriving at the car just as the sun was setting.

We had heard the Boreas Ponds were a great place for paddlers. Now we knew it was a great spot for hikers as well. And next time, we'll make sure to come earlier so we can explore more.

Recently retired, **Karen Williamson** served in various communications positions with NYS and the U.S. Department of Agriculture. A photographer by training and specialty (karenwilliamsonphoto.photoshelter.com), Karen and her family enjoy hiking, camping and canoeing, particularly in the Adirondacks.



If You Go

Gulf Brook Road is off the Blue Ridge Road. It is now a seasonal dirt road, closed by a locked gate during the winter and spring mud season. Once things dry out and the gate is opened, hikers can drive to the last parking area along the road to a locked gate. From there, it is a hike of about 2½ miles to the ponds themselves. DEC is developing a Unit Management Plan (UMP) for the property.

Currently, hiking trails in the Boreas Ponds Tract follow former logging roads. When the UMP process is completed, more trails may be developed, including some in the woods off existing roads and parking areas.

Visitors to the Boreas Ponds Tract can also enjoy other outdoor activities, including fishing, hunting, horseback riding, and biking. For more information, visit www.dec.ny.gov/lands/107504.html.

Twinkling Gems of Summer New York's Fireflies

By Cole Gilbert and Jillian Ditner

Although they're called fireflies or lightning bugs, these twinkling gems of summer evenings are neither flies nor bugs. In fact, they're beetles: lampyrid beetles to be exact. About 2,000 species occur worldwide, including more than 20 in New York. Males and females of most, but not all, of our species court each other by alternately flashing in amorous dialogues. Flashing also serves lifesaving functions, and more deadly functions as well.

Many people enjoy the beetles' light shows on summer evenings. Children are excited by the small greenish-yellow lights dancing before their eyes, but quickly learn that catching them can be challenging. The now-you-see-me, now-you-don't flashing sequence makes it difficult to guess the beetle's exact flight path. But there is much more to fireflies than just flashing tail lights. Here's some of the fascinating biology of New York's fireflies that you can look for in the coming months.

Firefly larvae hatch from eggs looking a bit like flattened armadillos—brownish armored plates with jagged edges—and forage on the ground. Being insects, they walk on six legs, and shed their larval skins twice as they grow. This period may last two years while they feed voraciously



on snails and slugs, which is why fireflies are commonly found in moist habitats preferred by terrestrial mollusks. Larvae of many of the *Photinus* species get more than nutrition from their prey—they also acquire chemicals that they convert into defensive steroids that make the larvae, and the adults they become, distasteful to would-be predators. After the larval period,

individuals pupate for a few weeks, metamorphosing into adult fireflies that typically live three to four weeks.

The year's earliest appearing firefly is the winter firefly, *Ellychnia corrusca*. Adults emerge from their pupal cases in fall and pass our winters in aggregations on the south side of large hardwood trees. They become active in early spring and fly during the day. Although they are closely related to nocturnally flashing species, winter fireflies lack light organs; males are attracted to females by odors.

Most of our other firefly species fly nocturnally after becoming adults in late spring and summer. As dusk approaches, early flying males leave their individual daytime perches to go courting at different times relative to sunset, and fly for varying periods. They also fly different flight paths, producing flash patterns characteristic of their species.

Patrick Goring



Firefly larva

Creatures that **GLOW** in the **DARK**

Ellychnia corrusca
Diurnal and lantern-less firefly



Photuris versicolor
Straight and level path, this firefly is a fast flyer



Photinus consimilis
Straight and level slow flyer



Photinus ardens
More or less level, slow



Photinus scintillans
An early nocturnal firefly that glows from the ground in



DUSK

EVE



w path

Photinus consanguineus

A low flier, follows a straight and level path, slow pulses

Photinus scintillans

A nocturnal species that stays close to the vegetation

4

Photinus ignitus

Straight level, slow path, flies at roughly eye level

6

Photinus pyralis

Flies upward then hovers before arching downwards

FEMME FATALE *Photuris versicolor*

The femme fatale firefly eats males of other species and gains nutrition for developing eggs and the males' defensive chemicals to protect them

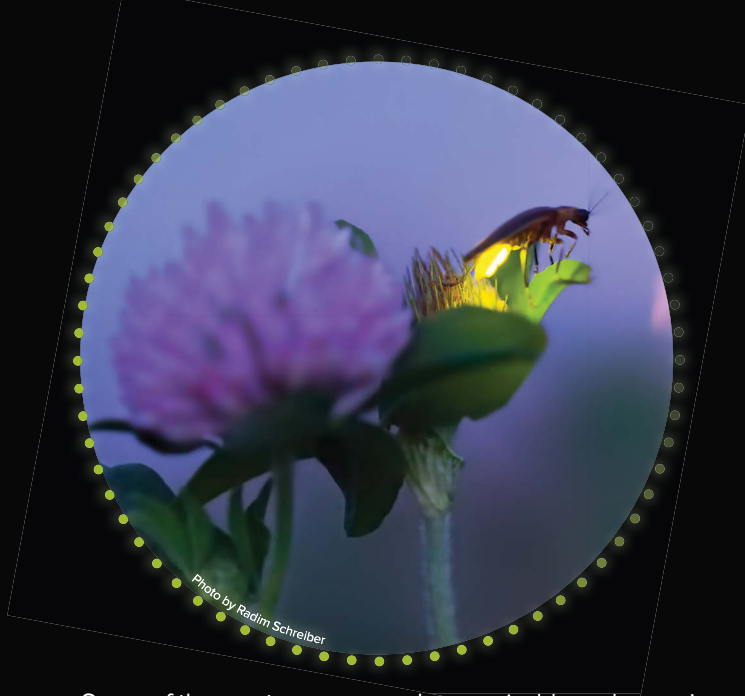


Photo by Radim Schreiber

Some of the most common and recognizable early evening fliers are male *Photinus pyralis*, which fly about a meter off the ground. Every six seconds or so they dip low to the ground, turn on their light organ, and soon after fly straight up so their illuminated path looks like the letter J. At the top, a male turns his light off and hovers for two or three seconds watching for female responses. If a female of his species sees his flash from her perch in the vegetation, she waits about two seconds before responding with a single flash of about a half-second duration. Thus, the dialogue begins. The male then orients toward her and flies about two meters, dipping down again to flash another rising J. Then he waits. She responds again. Eventually, he lands on vegetation near her and proceeds to walk, continuing the dialogue until he locates her.

Males and females of other firefly species engage in similar dialogues. Female *Photinus consimilis* prefer faster flashing males, but we don't know what other females like; there's still a lot to learn about firefly communication. Many will even respond to your flashlight. Try it.

Fireflies that are active in early evening often have a different flash color than species that are active after ambient light has waned. Late-night fliers typically sport a greenish flash, but this won't work for males that are active around sunset, because daylight reflecting off vegetation makes it harder to discriminate a small green flash from a greenish background. Many early evening fliers evolved a yellower flash which provides more contrast against the background. See if you can determine spectral differences between early and late-night flashes of fireflies in your area.

In addition to attracting a mate, flashes also warn would-be predators. For instance, males of many *Photinus* species are distasteful due to their youthful mollusk diet, so their flashes remind smart predators, such as toads,

bats and jumping spiders, that the flasher tastes bad. This is like the orange-and-black wings of monarch butterflies reminding birds that a monarch is loaded with bitter heart poisons, so they'd better not eat it. The firefly's flash serves the same warning function for many hungry viewers.

Some fireflies also use flashes for nefarious purposes. The most notorious are firefly *femmes fatales*, which include females of *Photuris versicolor* and several other species. A *P. versicolor* female will dialogue normally with males of her species, responding to his three-flash pattern with a single flash after three-quarters of a second. After mating, however, her behavior switches and the *femme fatale* becomes sloppier. She responds to a triple flash of her own *Photuris* males with a delay almost twice as long, and responds to single and double flashes of different *Photinus* males with responses of varying delay. If her response happens to match the delay that a male of another species expects, or if he is getting a bit desperate, he will engage in dialogue with her. But the amorous male is lured to his death, because the larger *Photuris* female will easily capture and eat him. She gains nutrition for her developing eggs, and more importantly, she obtains his defensive steroids to protect her eggs.

Some *Photuris* females don't bother with luminous pillow talk. When they see a male flashing, they take off like guided missiles, attacking him in mid-air. Intercepting a flying firefly in the dark is difficult for a person with an insect net; it must be really hard for insects with their relatively poor eyesight. We don't yet know how they do it.

Fireflies have many more stories to tell; we are still unraveling their many mysteries. So go out and enjoy the creatures that glow in the dark this summer, and marvel at their fascinating biology.

Cole Gilbert is a professor in Cornell University's Department of Entomology. **Jillian Dittner** works as the staff illustrator and graphic designer at the Cornell Lab of Ornithology (jilliandittnerstudios.com).

Further Reading

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Don't Get Beat by Summer Heat

By Asante Shipphils and Seema Nayak

For many New Yorkers, the return of warmer temperatures has been delightful. As the days got warmer, we finished packing away our sweaters in exchange for lighter clothing, opened windows, and plugged in fans.

Unfortunately, these steps are not enough to keep you cool on the hottest summer days. Planning for extreme heat is just as important as planning for other extreme weather conditions. In fact, a little planning before the next heat wave might save you or a loved one a trip to the hospital.

THE OVERLOOKED WEATHER HAZARD

It may be hard to believe, but extreme heat is a leading weather hazard in New York. Heat waves or extreme heat events are extended time periods of unusually hot weather, when conditions can be harmful to health. And these events have been increasing across the state as the number of days with recorded temperatures above 90 degrees Fahrenheit increases.

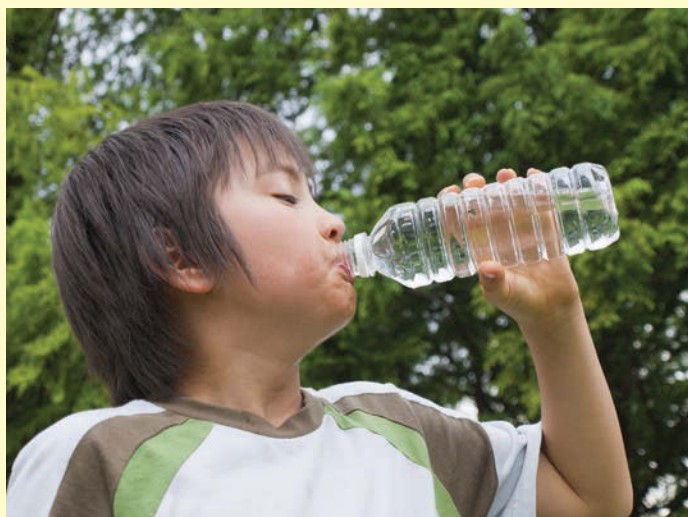
People generally don't think of extreme heat as a hazard that requires advance planning. While consecutive days of record-level hot temperatures may not destroy buildings or render roadways impassable like a flood or snowstorm,

extreme heat can be hazardous to your health. Persons taking a hike on a hot summer day need to take precautions, such as drinking more water, slowing their pace, or taking extra breaks to protect themselves against heat-related problems. Likewise, older adults who decide to spend an extended period outside when temperatures are high, must also be careful, even if they are only sitting on a bench.

Continued exposure to hot temperatures can cause dehydration and result in

heat-related illnesses ranging in severity from heat rash to potentially fatal heat stroke. Given this, it's not surprising that emergency department and hospital visits for heat-related illnesses occur during the hottest months of the year (see accompanying chart). Children, older adults, people with underlying health conditions (such as respiratory, cardiovascular, and kidney disease), and those who work or exercise for long periods of time outdoors are most vulnerable.





TAKE STEPS TO COOL OFF

Summer is a great time to enjoy the outdoors; it's a time when many people go hiking, camping, swimming, paddling, fishing, biking, picnicking, or simply walking. But during periods of extreme heat, be sure to stay safe by following these simple guidelines:

- Stay hydrated by having plenty of fluids available, and avoid alcohol, caffeine and sugary drinks. The average adult needs to drink at least two quarts of water a day, and people who are active should drink even more.
- Take regular breaks from physical activity and avoid strenuous activity during the hottest part of the day (11AM – 4PM).
- Brush up on the signs of heat-related illnesses that occur when the body is unable to cool itself. Learn the symptoms and first-aid responses (see chart).



Avoid strenuous outdoor activity during the hottest time of day. Stay inside where it's cool.

Overheated?

Heat-related illnesses occur when the body is unable to cool itself. The most common heat-related illnesses are heat stroke (sun stroke), heat exhaustion, heat cramps and heat rash. Here are the symptoms and first-aid responses.

Illness	Symptoms	What to Do
Heat stroke (sun stroke) This is an EMERGENCY! Act FAST!	<ul style="list-style-type: none"> • Hot, dry, red skin • Rapid pulse • High body temperature $\geq 105^{\circ}\text{F}$ • Loss of alertness • Confusion • Unconsciousness or coma • Rapid and shallow breathing 	<ul style="list-style-type: none"> • Call 911 immediately. • Cool the person quickly. • Bring to a cool place and use a cool bath or sponges, fans and AC. <p>Or</p> <ul style="list-style-type: none"> • Wrap ice packs in cloth and place on neck, wrists, ankles and armpits. <p>Or</p> <ul style="list-style-type: none"> • Remove clothing and wrap the person in cool, wet sheets.
Heat exhaustion	<ul style="list-style-type: none"> • Heavy sweating • Fainting • Vomiting • Cold, pale, clammy skin • Dizziness • Headache • Nausea • Weakness 	<ul style="list-style-type: none"> • Heat exhaustion can quickly lead to heat stroke so if symptoms worsen or don't improve get medical help. • Move the person to a cool place. • Loosen clothes and apply cool, wet cloths to the neck, face and arms. • Have the person sip water slowly. Provide half a glass of water every 15 minutes up to about 1 quart. Stop giving water if vomiting occurs.
Heat cramps	<ul style="list-style-type: none"> • Muscle cramps in the abdominal area or extremities • Heavy sweating • Mild nausea 	<ul style="list-style-type: none"> • Move the person to a cool place. • Apply firm pressure to the cramping muscle. • Gently stretch the cramped muscle and hold it for 20 seconds followed by gentle massage. • Have the person drink some cool water.
Heat rash	<ul style="list-style-type: none"> • Skin irritation that looks like a red cluster of pimples or small blisters 	<ul style="list-style-type: none"> • Move the person to a cool place. • Keep the affected area dry. • Have the person use talcum powder to increase comfort.

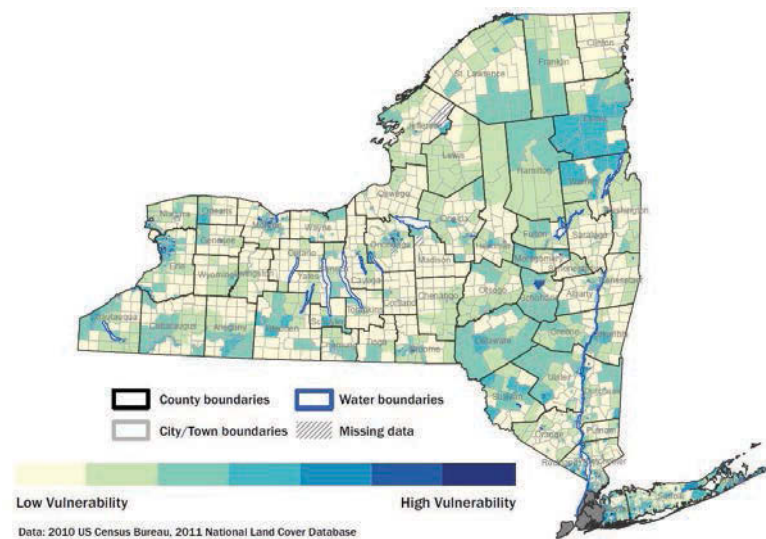


In addition, the New York State Department of Health (DOH) suggests the following recommendations for everyone, whether you're an outdoor enthusiast or not:

- During extreme heat, if possible, plan to spend at least two hours a day in air conditioning to cool off. DOH keeps a list of facilities where you can go to cool off during extreme heat: www.health.ny.gov/environmental/weather/cooling.
- Note the sunny and shady sides of your home so that when it's hot you can open windows and blinds on the shady side and close them on the sunny side to help cool down.
- Don't rely on fans to cool down during extreme heat. Research has shown that fans can be more harmful than helpful when indoor air temperatures are hotter than body temperatures.
- Never leave young children, people with mental or mobility limitations, or pets in a parked car, even briefly. Temperatures in the car can become dangerous in just a few minutes.
- Check on your neighbors, especially seniors, when temperatures climb.
- Be aware of medications that may make you more sensitive to the sun and heat.
- To learn more about extreme heat and places to cool off, visit www.health.ny.gov/ExtremeHeat.

So, as you enjoy the summer, make sure you are prepared for extreme heat. Having what you need to stay cool, hydrated and informed will help ensure you and those you love make the most of all that summer has to offer, even on the hottest days of the year.

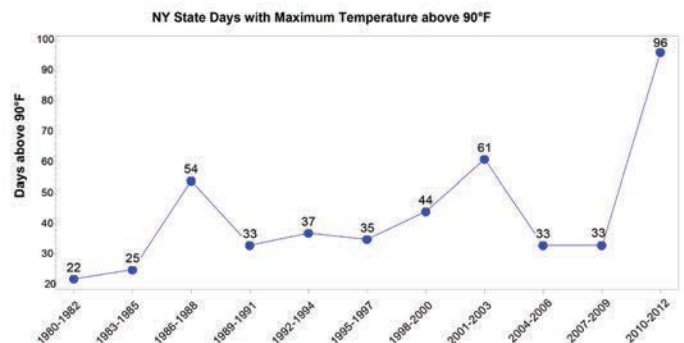
Asante Shipphits and **Seema Nayak** work for the New York State Department of Health in Albany.



PLANNING FOR A HOTTER NEW YORK

A network of agencies and community government offices work year-round to plan for extreme heat events in the state. DOH developed Heat Vulnerability Index maps for each county to identify areas with greater numbers of people who may be more vulnerable to extreme heat, and to help communities develop strategies to reduce heat-related illness. Many factors contribute to heat vulnerability, such as people's overall health, income and education, the community's environment (urban areas tend to get hotter), and demographics, such as age. You can learn more about NY's heat vulnerability maps at www.health.ny.gov/environmental/weather/vulnerability_index/.

DOH is developing Heat and Health Profile Reports for each county. The reports will help local governments track past and project future local temperatures, monitor heat-related illness rates, and map heat vulnerability. DOH will share these compilations with local land-use planners to help guide mitigation efforts, such as planting trees, creating green roofs, and constructing cooling paved areas that reflect solar energy instead of letting it be absorbed. The reports identify steps municipalities can take to become certified as a Climate Smart Community (www.dec.ny.gov/energy/96511.html). They may also be useful for emergency response planning, land-use planning, zoning and building codes, and efficient transportation policies.





Rogers Environmental Education Center Celebrating 50 years

By Ann Harrison
DEC photos unless otherwise noted

June 10, 2018 marks the 50th anniversary of the state's first nature interpretive facility, Rogers Environmental Education Center. After learning that the Rogers State Game Farm was going to be phased out by the then Conservation Department, John Borst, President of the Sherburne Rotary Club, read an article in the April-May 1963 *Conservationist* magazine on how to plan a nature center. Mr. Borst got the Rotary Club's approval to fund a feasibility study by Audubon Society to develop a conservation education center. In 1966, the state approved Audubon's proposal, and allocated \$100,000 to develop the



How the Visitor Center looked at the dedication ceremony on June 10, 1968.



Rogers Center staff in 1978.



A drawing by John Weeks



Environmental education has long been the purpose of the center.

Courtesy/Friends of Rogers

New York State Conservationist, June 2018



First director of Rogers Center, John Weeks, addressing the crowd at the 40th anniversary celebration.

center and hire its first director, John Weeks. Now 92 years old, Mr. Weeks' pen-and-ink drawings of the vision for the main building, trails and vistas helped secure the funding that took the center from concept to reality.

In 1968, a citizens advisory committee was formed to assist Mr. Weeks in evaluating programs and establishing community relations; it is now known as the non-profit Friends of Rogers. Due to the state's severe fiscal situation in 2010, DEC was no longer able to staff the center. Instead, DEC expanded the agreement with Friends of Rogers Center to continue providing education programs and services for the local community.

Today, this partnership has allowed another generation of families to experience the joys of nature through first-hand experiences and guided programs. Friends of Rogers is commemorating Rogers Environmental Education Center's 50th anniversary with signature programs throughout the year, including a very special birthday celebration on June 9, featuring an appearance by Mr. Weeks.

Ann Harrison is chief of DEC's Bureau of Environmental Education



Visitors are invited to enjoy the trails, programs, and special events held throughout the year.



Winter programs are popular events at Rogers.



For more information hop over to:
www.FriendsofRogers.org



BRADDOCK BAY WILDLIFE MANAGEMENT AREA

*Diverse Habitats Supporting a
Bird Haven and Outdoor Recreation*

By Heidi Kennedy

One of the few remaining large wetland areas along the south shore of Lake Ontario lies northwest of Rochester, within the Braddock Bay Wildlife Management Area (WMA). Braddock Bay WMA is a shallow water bay/marsh complex that features a diverse array of habitats, including emergent marsh, open water, forest, grassland, and shrubland. The complex, which is a designated Bird Conservation Area and is listed as an Audubon Important Bird Area, provides important nesting, feeding, and resting habitats for waterfowl, marsh birds, songbirds, raptors, and shorebirds. As a result, it's a great spot for bird lovers.

During the past few years, DEC has worked with multiple partners, including EPA, Ducks Unlimited, the U.S. Army Corps of Engineers, the State University of New York College at Brockport, U.S. Fish and Wildlife Service, The Nature Conservancy, and the Town of Greece, on several wetland restoration projects to improve habitat. Construction of new channels and potholes through dense cattail areas, emergent marsh and sedge meadow restoration, and invasive species control have resulted in greater habitat diversity, and supported a variety of fish and wildlife species. Another project—restoration of the barrier beach off the east spit of Braddock Bay—will protect the existing emergent marsh in the bay and provide quality habitat for years to come.

Because of its proximity to Lake Ontario, Braddock Bay is an important migratory bird stopover site. This means there are plenty of great opportunities to view a variety of

migrating waterfowl, songbirds, raptors, and shorebirds.

An average of 54,000 raptors, including up to 17 species, are tallied each spring from March through May as part of spring hawk counts conducted by Braddock Bay Raptor Research (<https://bbrr.org/>). The peak of raptor migration occurs in late April, and the best conditions for raptor viewing are days with southwest winds of 12 mph or stronger.

During March and April, the Rose Marsh Area provides excellent opportunities to see migrating northern forest owls such as northern saw-whet and long-eared owls. Migrating songbirds, including many warbler species, can also be observed on the WMA. The peak spring songbird migration is in mid-May, and the peak fall migration occurs in early October.

The Braddock Bay Bird Observatory (<https://braddockbaybirdobservatory.wordpress.com/>), a research, conservation and education organization comprised entirely of volunteers, bands songbirds on the WMA and adjacent areas to better understand bird migration, including their migratory stopover locations. Between 1986 and 2017, the organization banded individuals from 140 different species in the spring and 125 species in the fall!

Migration isn't the only time birds can be seen at Braddock Bay. During breeding season, a large assortment of species nest on the area, including waterfowl—such as mallard and wood duck, and several state-listed species, including least bittern



Braddock Bay has a diverse array of habitats.

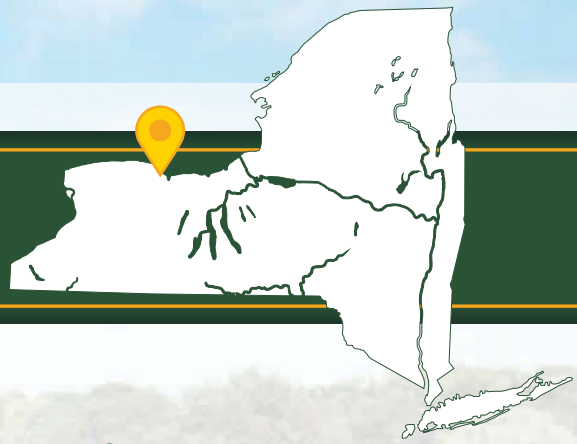


Northern saw-whet owl



Long-eared owl

**LOCATED IN GREECE AND PARMA,
WEST OF ROCHESTER IN
MONROE COUNTY; SIZE: 2,125 ACRES**



Site Features



NOTES: Open year-round. Access features include multiple parking areas, trails, kiosks, boat launches, and wildlife observation/fishing platforms (including an accessible platform near where Salmon Creek meets Braddock Bay). There is an additional boat launch at the adjacent Braddock Bay Marina. Special regulations apply to certain activities, including hunting, and permits are required for trapping. For more information on special regulations and permits, please use the contact information below.



DIRECTIONS: Braddock Bay WMA can be accessed from multiple roads near the Lake Ontario State Parkway west of Rochester. The majority of Braddock Bay WMA is in the Town of Greece, but there is also a parcel in the Town of Parma on Bennett Road.



CONTACT: For information on Braddock Bay WMA, call DEC at (585) 948-5182, or write to NYS DEC, 1101 Casey Road, Box B, Basom, NY 14013, or visit www.dec.ny.gov/outdoor/24428.html.

(threatened), pied-billed grebe (threatened), American bittern (special concern), northern harrier (threatened), and sedge wren (threatened). During the winter, northern harriers (state threatened) and short-eared owls (state endangered) can sometimes be seen using the grassland habitat. Snowy owls are also occasional visitors to the WMA.

In addition to birds, the 2,125-acre area provides habitat for a variety of mammal, reptile, amphibian, and fish species. Recent wetland restoration projects have improved habitat for amphibians, wetland mammals such as muskrat and mink, and fish species such as northern pike.

The diverse habitats and numerous access features at Braddock Bay, including boat launches, fishing/wildlife observation platforms, and trails, including a marsh boardwalk, provide ample opportunities for hunting, fishing, trapping, and wildlife observation. With abundant open water and wetland areas, fishing and waterfowl hunting are very popular activities on the WMA. Upland hunting is also popular, and DEC releases ring-necked pheasants at three different grassland areas on-site.

With countless recreation opportunities and spectacular views of Lake Ontario, Braddock Bay is a perfect destination for outdoor enthusiasts to visit.

Heidi Kennedy is a wildlife biologist in DEC's Iroquois Field Office.

Brian Burgeson



Wood duck

Ryan Kayhart



Black-throated blue warbler

Daena Ford



BATH FISH HATCHERY

By Ken Osika; DEC photos unless otherwise noted

Bath Fish Hatchery is located at the headwaters of Cold Brook, a major tributary of Keuka Lake. Established in 1893, it is one of New York's oldest hatcheries. The hatchery's original wooden building burned down in 1955 and was replaced with the block and brick structure still in use today.

Fish culturists raise brown trout, rainbow trout and lake trout at this facility. Bath Hatchery staff are responsible for stocking streams, lakes and ponds in nine counties across the Finger Lakes region: Broome, Cayuga, Chemung, Seneca, Schuyler, Steuben, Tioga, Tompkins and Yates.

Bath Hatchery's location enables staff to take advantage of the area's high-quality spring water: staff tap into three springs and one pumped well, which together supply 1,500 gallons/minute for trout culture. Brown trout are raised from 540,000 eyed eggs obtained in early October from DEC's Randolph Fish Hatchery in Cattaraugus County. Fish not stocked by Bath staff are sent to other hatcheries (e.g., Chateaugay and Rome) and raised to stockable size.

In early October, staff set gill nets in Cayuga Lake to capture spawning lake trout. Staff collect and fertilize eggs on a pontoon boat, then send the eggs to the hatchery to be incubated, hatched, and raised. The lake trout are stocked in six Finger Lakes (Canadice, Hemlock, Canandaigua, Seneca, Cayuga and Owasco), as well as Otsego Lake and Lake Champlain. All the fish are fin-clipped to identify them as hatchery fish, which helps biologists determine their age and how these hatchery fish are performing in specific waters relative to native fish.

Finger Lakes strain rainbow trout that spawn in Cayuga Inlet are captured in a fish ladder near Ithaca. Bath Hatchery staff bring the eggs to Bath to be incubated, hatched and raised. Wild rainbow trout will eventually be stocked in tributaries of Keuka, Seneca, Cayuga, Owasco and Skaneateles lakes to supplement existing wild populations in those waters.

Hatchery staff also cross wild female rainbow trout with domestic male rainbow trout to create a hybrid rainbow trout. The hybrids are stocked exclusively in Skaneateles Lake, producing a high-

Species Spotlight:

WILD FINGER LAKES STRAIN RAINBOW TROUT (*ONCORHYNCHUS MYKISS*)

- Non-native species; introduced from the Pacific coast in the late 1800s.
- Has small dark spots all over the body and caudal (tail) fin; stream-dwelling rainbows have a colorful pinkish-red band along their sides; individuals that live in large lakes but spawn in streams are called steelhead and are silver with fewer spots.
- Tolerates warmer water than native brook trout, making them more common throughout the state.
- Stream-dwelling rainbows feed primarily on insects; lake-dwelling rainbows feed on insects and small fish.



Photo courtesy of James Nolan



Rainbow trout

**LOCATED ONE MILE NORTH OF THE VILLAGE
OF BATH AT 7169 FISH HATCHERY ROAD
(OFF NY-54N/GENESEE ST) IN STEUBEN COUNTY**



If You Go

Bath Hatchery features an outdoor educational area with three kiosks that explain the history of the hatchery, provide a descriptive map of the fish species and waters stocked, and detail the life history of fish and stocking methods. Self-guided tour brochures are also available. A display pond with adult fish is located adjacent to the parking area, and a picnic area is available on-site.



LOCATION: 7169 Fish Hatchery Rd.,
off Rte. 54, one mile north of Bath.



VISITOR HOURS: Open 8:00 AM – 3:45 PM
daily throughout the year. There is no
admission fee.



SPECIES RAISED: Brown trout, rainbow trout,
lake trout; only hatchery in state to raise
Finger Lakes strain lake trout and wild Finger
Lakes strain rainbow trout



PHONE: (607) 776-7087

quality fishery. In addition, hatchery staff also raise rainbow trout from eggs obtained from the Randolph Hatchery and fingerling fish from the Van Hornesville Hatchery. These fish are stocked in Lake Erie tributaries and small lakes and ponds in the Southern Tier.

Recently, DEC has made improvements to the hatchery, including:

- restoring an existing well, which now provides 130 gallons of high-quality water per minute to supplement the hatchery water supply;
- constructing a new fish feed storage building to improve the feed delivery process; and
- constructing a new predator exclusion structure to enclose the ponds and provide needed shade, which will prevent the loss of thousands of fish each year to crows, great blue herons, kingfishers, mink, and raccoons, while also reducing algae growth.

Ken Osika is the manager at DEC's Bath Hatchery.

Photo courtesy of James Nolan

School groups love a visit to the Hatchery.

A new predator exclusion structure is being constructed.

Hatchery staff collect eggs from wild rainbows.

Courtesy Collecto family

Chinook salmon



Booming Chinook Salmon Fishery

A DEC survey of Lake Ontario boat anglers reported an estimated 96,000 chinook salmon were caught and 53,000 harvested in 2017, the highest rates recorded since the survey began in 1985. The annual survey is part of the state's fishery management efforts to assess fishing quality and annual harvests. Results have shown that chinook salmon fishing has been exceptional since 2003. Chinook, or "king" salmon, are the largest and most sought-after Pacific salmon in the Great Lakes, and Lake Ontario produces some of the largest chinooks, with many exceeding 30 pounds. DEC stocks chinooks in Lake Ontario, complementing natural reproduction of these game fish. A recent statewide survey estimated anglers spent more than 2.6 million days in pursuit of fish on Lake Ontario and its major tributaries. The estimated value of these fisheries exceeds \$112 million annually for local economies.

Wanted: Coho Salmon Heads

DEC has teamed up with Canadian scientists to evaluate coho salmon stocking programs on Lake Ontario, and is asking anglers to assist by collecting coho salmon heads harvested from Lake Ontario and its tributaries. The heads can either be dropped off at freezers located at various sites from the Niagara River to Oswego (www.dec.ny.gov/outdoor/112942.html), or stored in an angler's personal freezer and DEC will arrange to pick them up—just send an email to fwfishlo@dec.ny.gov. DEC annually stocks cohos at several sites in the Lake Ontario watershed. Stocked fish are marked via fin-clipping and/or tagged with 1mm of coded wire—invisible to the naked eye—inserted into their snouts. DEC uses special equipment to retrieve the tags from the harvested heads and uses that information to assess the effec-

Courtesy Agness family

Coho salmon



tiveness of stocking programs. Anglers are requested to fill out cards listing the date and location of the catch, the fish's length, and whether the adipose fin is clipped. Questions regarding collection instructions or the mass marking program can be directed to Michael Connerton at 315-654-2147; fwfishlo@dec.ny.gov. Recovery of mark and tag data will continue until 2021.

Saltwater Fishing Survey

Recreational saltwater anglers should keep their eyes out for DEC field staff, who will be at boatyards, local beaches and other saltwater access points conducting a confidential fishing survey. This survey involves in-person interviews to obtain data that will be used to help manage fisheries. Anglers may be asked what kind of fishing gear they use, the number of fish caught and kept, and demographic information. For more information on the survey, visit NOAA's Marine Recreational Information Program webpage at www.countmyfish.noaa.gov.

DEC photo





Pulling water chestnut

Help Stop the Spread

You can help protect our state's natural resources from invasive species. July 8-14 is the fifth annual Invasive Species Awareness Week, which aims to provide New Yorkers with the knowledge, skills, and motivation to help fight invasive species and their negative impacts. The event is coordinated by the Invasive Species Council, the Invasive Species Advisory Committee, and New York's eight PRISMs (Partnerships for Regional Invasive Species Management) and their partner organizations. This year's theme is "What YOU can do to stop the spread!" To get involved, visit www.dec.ny.gov/animals/105650.html or contact your local PRISM coordinator at www.dec.ny.gov/animals/47433.html.

Spotted Lanternfly

New York State is asking the public to report any sightings of the spotted lanternfly, an invasive pest from Asia that feeds on more than 70 plant species, including tree of heaven, maple, apple, grape vines and hops. Spotted lanternflies feed on a plant's sap, which stresses the plant and makes it vulnerable to disease and insect attack. The insect also excretes a sticky fluid called honeydew which attracts sooty molds that interfere with photosynthesis, negatively affecting the growth and fruit yield of plants. Although no live spotted lanternflies have been found in New York, they have been confirmed just over the border in Pennsylvania, and have been found in neighboring states.



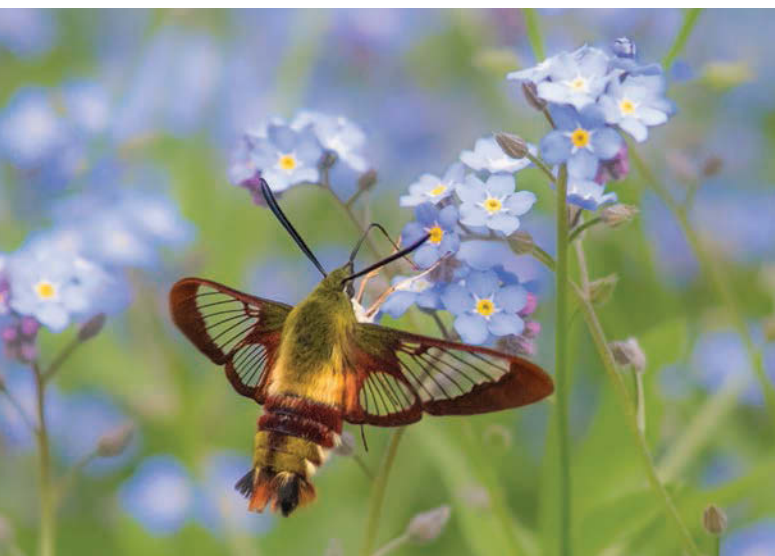
The insect can jump and fly short distances, but spreads primarily through human activity. They lay their eggs on various surfaces such as vehicles, stone, rusty metal, outdoor furniture and firewood, which allows them to easily hitch rides into New York. Nymphs are black with white spots and turn red before transitioning into adults. Adults appear in July and are approximately 1-inch long and 1/2-inch wide at rest, with eye-catching wings. If you believe you've found a spotted lanternfly, send photos to spottedlanternfly@dec.ny.gov, and visit www.dec.ny.gov/animals/113303.html for more information.

Lake Champlain Property Acquired

New York State recently acquired more than 600 acres of undeveloped Lake Champlain shoreline, expanding opportunities for people to access these pristine waters and enjoy picturesque views of the eastern Adirondacks. The parcel, commonly referred to as the Trembleau Mountain / Lake Champlain Shoreline, lies across from Schuyler Island, an uninhabited, 161-acre, DEC-owned property that was the site of a Revolutionary War battle and is a popular spot for kayakers and boaters. The site features four rugged peaks, as well as pitch pine stands and diverse wildlife habitat for turkeys, grouse, goshawks, porcupines, and nesting bald eagles. A network of forest roads that thread through the property may become future trails. The state purchased the property, located in the town of Chesterfield, Essex County, from the Open Space Institute and will add it to the Adirondack Forest Preserve, protecting these lands for generations to come.



Greg Miller



Clearly Mistaken

Laurie Dirkx shared this photo of a clearwing hummingbird moth. Because of its size, speed, and feeding habits, people frequently mistake the moth for a small hummingbird. Thanks, Laurie for a beautiful photo!

Role Reversal

I found this picture on my trail camera. The young doe is aware of the coyote 20 feet away, but not overly concerned. I am surprised a deer would allow itself to be so close to a predator.

John Kapica

What a fun shot! The doe appears to be demonstrating an assertive posture, and the coyote looks young and not inclined to challenge her. Healthy adult deer usually have little to fear from coyotes, except in deep snow conditions. Even fawns can typically escape coyote predation once they're about six weeks old.

—Sue Booth-Binczik, DEC Wildlife Biologist



June Means Young Wildlife!

These are just a sample of the reader-submitted images of young wildlife that we've received. To see more, view the digital edition. If you don't receive the digital edition, visit our website (www.theconservationist.org) and log onto your account under Customer Service to add your e-mail address.

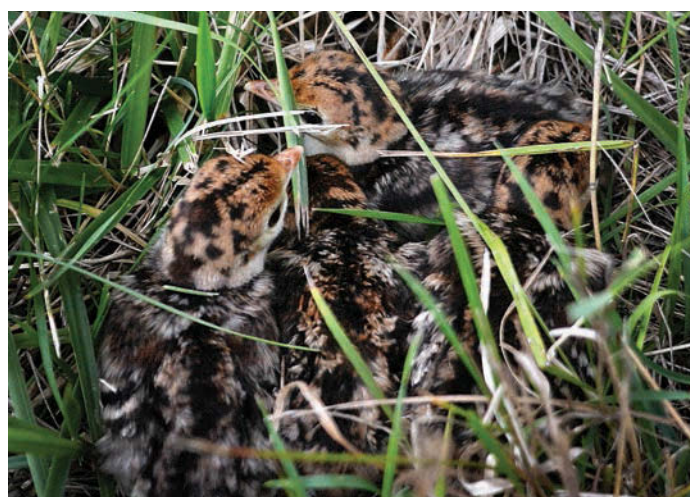
Remember, if you encounter young wildlife, don't disturb them; observe them from a distance. Follow the motto "If You Care, Leave them There." For more information, visit DEC's website at www.dec.ny.gov/animals/6956.html.



Patrick DeSorbo



Jennifer Rich



Pam Monacelli



What's in a Name?

Retired DEC fisheries biologist Pat Festa sent us this photo of a smallmouth bass and a largemouth bass that are both 14" long. Pat said, "In all my years of fishing, I never took notice of this side-by-side perspective and just how much difference there really is in gape size between the two species."

Readers Weigh In: Why Do Lean-Tos Have Three Sides?

In the December 2017 *Conservationist*, we asked readers if they had any theories about why lean-tos are three-sided. Virtually all the responses were the same: to shelter the occupant from the weather, while allowing heat and light from a campfire to radiate into the structure.



Tom Caifa

E-mail us at: magazine@dec.ny.gov
 Write to us at: Conservationist Letters
 NYSDEC, 625 Broadway
 Albany, NY 12233-4502
 facebook: [NYSDECtheconservationist](https://www.facebook.com/NYSDECtheconservationist)

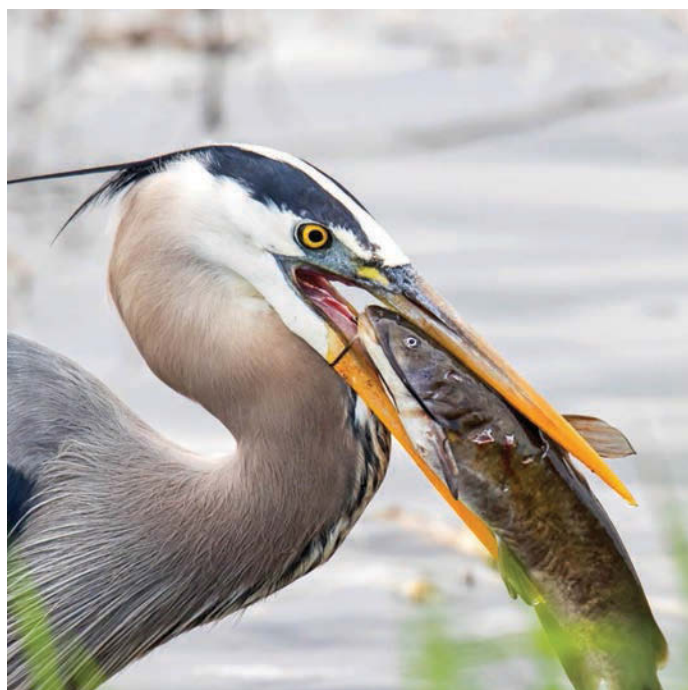


Ask the Biologist

Q: How does a great blue heron swallow a large bullhead without getting injured by the fish's sharp spines on its dorsal and pectoral fins?

A: In my observations of herons eating large fish, the fish are first speared (sometimes repeatedly) and then always swallowed headfirst, forcing the fins to collapse against the fish's body. In the case of a bullhead that can lock its spines perpendicular to its body, I, and a fellow birder, have seen the heron use its beak to forcefully shake the bullhead and systematically break (or remove) the three spines before swallowing the fish headfirst.

—Ray Perry, Director, DEC's Five Rivers Environmental Education Center



Aaron Winters

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



Welcome to the Jungle— Orange County

On March 25, ECOs Adam Johnson, Tom Koepf, Deo Read, Lucas Palmateer, Will Chomicki and Investigator Josh Sulkey entered an auction house in Orange County that advertised various endangered and exotic animal mounts. ECO Chomicki had previously confirmed that DEC had not issued any permits for these sales. Inv. Sulkey performed a walk-through of the establishment to confirm all the items displayed were for sale and then called in the uniformed officers for enforcement. The ECOs seized multiple items including mounts of an African lion, a mountain lion, and a wolf. Legal action is pending.

Out of Jail...and Back In— Sullivan County

On March 27, ECO Tom Koepf received a complaint that someone had dumped garbage on a vacant property in the

town of Mamakating. Officer Koepf dug through the garbage until he found evidence leading him to a residence in Middletown. After conducting interviews and obtaining statements, ECOs Koepf and Corey Hornicek determined the individual who had dumped the garbage was currently incarcerated at the Orange County Correctional Facility on DWI charges. The officers filed charges in Mamakating Town Court for unlawful disposal of solid waste, depositing a noisome and unwholesome substance near a public highway, and trespassing. An arrest warrant was issued. That same evening, ECO Koepf received a call from the jail that the defendant had made bail on the DWI charges. ECO Ricky Wood went to the jail, picked up the subject on the arrest warrant and had him arraigned on the environmental charges. The defendant was immediately remanded to the Sullivan County Jail, with a return date to answer to his additional offenses.

Early Start—Richmond, Kings, Queens & Bronx Counties

On April 14, ECOs Waldemar Augustcinski and Max Woyton worked an overnight shift in anticipation of opening day of recreational striped bass season. The ECOs issued 30 summonses for possessing striped bass out of season, possession of undersized striped bass, possession of striped bass over the limit, failure to release fish without undue harm, possession of mutilated striped bass, and failure to carry a marine registry. Fifty-seven striped bass were confiscated and either donated or released back into the water.

Lost in the Dark— Onondaga County

On March 31, Forest Ranger Chester Lunt received a call from central dispatch at approximately 6:30 PM regarding a couple lost in Morgan Hill State Forest. Ranger Lunt called the cell number dispatch provided and spoke to the female subject, who reported that she and her boyfriend went hiking into Labrador Hollow Unique Area to view Tinker Falls and had mistakenly taken the marked foot trail up and over the hilltop. Ranger Lunt directed the couple to remain at their current location, and located them half an hour later at Spruce Pond. He transported the uninjured couple back to their car. Ranger Lunt noted the couple was inadequately prepared for a hike in late March: they had improper footwear, were wearing light cotton clothing, and did not have a way of producing light other than their cell phones.

New York State Conservationist, June 2018



Free Fishing Weekend

June 23 & 24

Each year, the last full weekend in June is designated as Free Fishing Weekend in New York State.

During those two days, anyone can fish the freshwaters of New York without a license. Free fishing weekend allows everyone the opportunity to sample the incredible fishing New York has to offer. Panfish, bass, walleye, pike, salmon, trout, musky, and bullhead are just a few of the many fish species that you can fish for during New York's Free Fishing Days. Free Fishing Weekend is the perfect time to introduce a friend or relative to the sport.

For more information about Free Fishing Days in New York, visit
www.dec.ny.gov/outdoor/89821.html



**Department of
Environmental
Conservation**

Back Trails

Perspectives on People and Nature

Three Rules by John Van Niel

A couple of summers ago, I was reminded of three rules I seem doomed to relearn: 1) my wife is always right; 2) never leave home without a camera; and 3) spend less time worrying about what to write in my monthly Finger Lakes Times column, *Speaking of Nature*.

It all started when my wife suggested we take a short paddle in the canoe before sunset. We like to explore the Erie Canal near Montezuma National Wildlife Refuge.

We seemed to have the entire canal to ourselves as we slipped our canoe into the still water and paddled under a bridge. My attention was immediately drawn to the raucous calls of a flock of crows. They were announcing the presence of a predator, and as we approached, I told Laura to watch for something more than a hawk; an eagle perhaps. As soon as I said that, an animal crashed out of sight into the brush on shore. I didn't even catch a glimpse, but Laura emphatically stated it was a fisher.

Fishers are members of the weasel family. Despite their name, they are not at all associated with aquatic habitats. They are carnivores (therefore the cause of the crows' mobbing behavior) and eat a variety of things including small rodents, carrion, birds and most famously, porcupines. Assuming my wife actually did see a weasel-like animal along the river, it would more likely be something semi-aquatic. "Was it a mink?" I asked. "NO, it was huge" she replied. "Otter?" I tried. "No, the tail was wrong" was her adamant response. It is important to note that fisher are large (up to four feet) and they do have a different tail than an otter,

but Laura has never seen a live fisher and they are not common here. I remained skeptical until a rustling of limbs turned our attention back to shore. Staring at us from the depths of a honeysuckle bush was... a fisher (Lesson One).

We were a mere 10 yards from shore and followed the fisher's progress along the bank by watching the vegetation move, hearing twigs snap and seeing the occasional swatch of dark fur. Then he came right down to the water's edge and began to drink, giving us a great view (Lesson Two). He even treated us to a show as he climbed up a sapling and out a branch to get a different view of us. He climbed down the tree face-first and disappeared into the undergrowth. With big smiles, we finished our paddle and I had no doubt what to write about this month (Lesson Three).

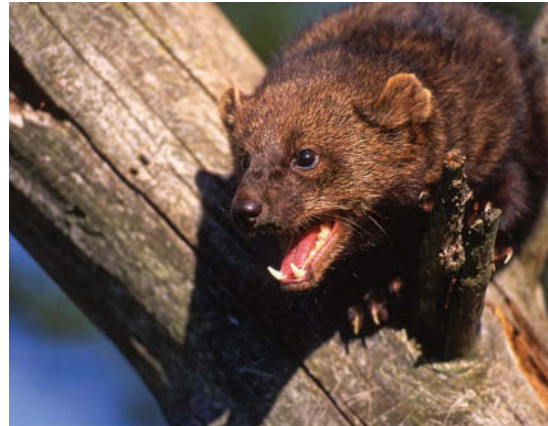
With the fishers' return to the Finger Lakes, we now have five weasel species, with river otter and fisher being the largest, mink in the middle and long- and short-tailed weasels being the smallest. Those last two are the ones that can turn white in winter; short-tailed weasels are also known as ermine. Fisher are traditionally forest creatures; when the Finger Lakes region was converted to agriculture, fisher disappeared. The forests have returned and laws are in place to protect animals like the fisher so their range is expanding along with black bear and bobcat, for the same reasons.

In March of 2015, my trail cam captured images of a fisher at our Seneca Falls property. I found his tracks for about two weeks, and then he was gone. Based on their size, that animal and the one I

Bill Banaszewski



Bill Banaszewski



recently spotted were most likely males. That makes perfect sense as it is the males of this species that establish new territories when they are pushed from their natal home ranges. The next exciting phase in the natural history of this species will be the arrival of females.

I have a bit of advice for the male I saw on the bank of the Erie Canal: when that first female arrives and insists she saw something, no matter how improbable, assume she's right.

Professor of Environmental Conservation at Finger Lakes Community College, **Dr. John Van Niel** is a columnist for the *Finger Lakes Times*, where a version of this essay first appeared. See more of his work at www.fltimes.com.

I'M A CONSERVATIONIST.



Tara, her sister Tiffany, and
Tiffany's son Jordan enjoy
a hike at Mohonk Preserve.

Two years ago, environmental specialist, beekeeper, and outdoor enthusiast Tara Salerno (pictured at left) donated part of her liver to her younger sister, Tiffany (right). Tiffany had been suffering from primary sclerosing cholangitis, an autoimmune disease that damages the liver, and had been on a waiting list for more than two years.

Thankfully, the surgery was successful and both sisters are doing well. Tiffany has even started her career as a registered nurse.

More than 10,000 New Yorkers are currently waiting for organs, eyes and tissues. You can enroll today online at donatelife.ny.gov.

It just might save a life.

AND AN ORGAN DONOR.

ORGAN DONORS SAVE LIVES.

Register today!

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Department
of Health



Pete Mauney



Time-lapse photo showing stars and fireflies.

See page 17

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