

Trout in the Classroom | Striper Study | Pond Brookies

NEW YORK STATE

# Conservationist

APRIL 2016

Trout & Sprouts:  
Springtime in  
New York

# NEW YORK STATE Conservationist

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Andrew M. Cuomo, Governor of New York State

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Dear Reader,

In late February, we bid an unexpected farewell to DEC's first commissioner, Henry L. Diamond, who passed away at the age of 83. Appointed by Governor Nelson Rockefeller as the agency's first commissioner on the first Earth Day, Henry served the state with great distinction from 1970 to 1973. He was a pioneer and steadfast champion for the environment during a period when government agencies were slow to recognize the need to combat air and water pollution.

In his capacity at DEC, Henry combined all New York State resource management and anti-pollution programs into the nation's first environmental department. He was at the forefront of creating programs to deal with mercury pollution and solid waste management, initiatives which later became models for many other states.

It's because of early leaders like Henry Diamond, and the strong efforts of DEC's dedicated conservation staff over the years that we can continue to celebrate the annual rite of passage that is fishing season in New York.

With more than 7,500 lakes and ponds, 70,000 miles of rivers and streams, and hundreds of miles of coastline, our state has some of the best fishing in the country. New York is home to four of the Bassmaster's top 50 bass lakes, drawing anglers from around the globe for great smallmouth and largemouth bass fishing. Coldwater anglers find the crystal clear lakes and streams of the Adirondack and Catskill parks make New York home to the best fly fishing east of the Rockies.

Through Governor Cuomo's NY Open for Fishing and Hunting Initiative, we are working hard to make the sport more accessible and affordable for all to enjoy. We have streamlined fishing and hunting licenses, reduced license fees, and improved access for fishing opportunities. We have also prioritized repairs at our 12 DEC fish hatcheries, which are a vital part of our efforts to sustain recreational fisheries, and foster restoration of rare native fish. I encourage everyone to visit one of DEC's hatcheries to learn about the world-class efforts of our talented and dedicated staff.

Fishing is a wonderful way to reconnect with the outdoors. If you're not already one of the 1.6 million anglers in New York, I encourage you to give it try this season.

Happy casting!

Basil Seggos, Acting Commissioner



Department of  
Environmental  
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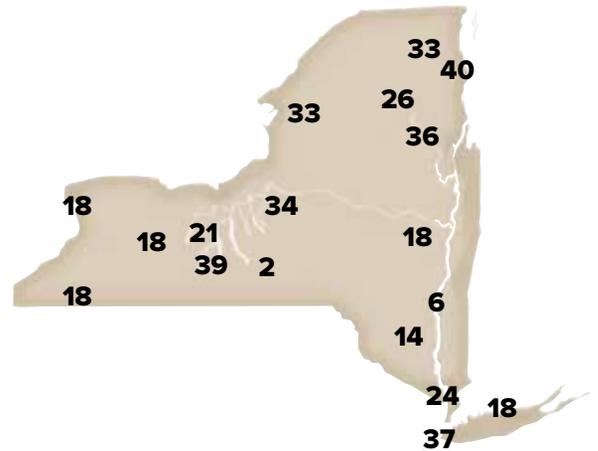


April 2016 Volume 70, Number 5

See page 2

# Contents

- 2 From Eggs to Fish**  
Raising trout in the classroom  
By Amanda K. Jaros
- 6 Violets of New York State**  
A look at NY's surprisingly diverse violets  
By Mike Adamovic
- 10 When Birds and Glass Don't Mix (and what you can do about it!)**  
Bird-friendly buildings  
By Dr. Christine Sheppard
- 14 Fire at Roosa Gap**  
DEC Forest Rangers battle Ulster County wildfire  
By DEC Forest Ranger Scott Sabo with Bernadette LaManna
- 18 Giving Back**  
I Love My Park Day builds next generation of park stewards  
By Laura DiBetta and Robin Dropkin
- 21 Keeping Track**  
Cooperative diary program helps biologists manage Finger Lakes fisheries  
By Pete Austerman
- 24 Searching for Stripers**  
A glimpse into New York's striped bass fishery  
By Jessica Steve
- 26 Bringing Back Brookies**  
Biologists return native trout to Adirondack pond  
By Rob Fiorentino with Eileen Stegemann
- 30 Stopping the Spread**  
Collaborative effort to combat invasive species  
By Catherine McGlynn
- 34 Nature Play at Clark Reservation**  
Bringing the park to the playground  
By Tom Hughes



**Special Insert:**  
**Conservationist**  
*kids!*

## Departments

**33** On Patrol | **36** Briefly | **38** Letters | **40** Back Trails

**Front cover:** Common blue violet by Mike Adamovic  
**Back cover:** Brook trout by Ed Ostapczuk

The author's son draws a picture of a trout being raised in his classroom.



# FROM EGGS TO FISH:

## Raising Trout in the Classroom

By Amanda K. Jaros  
Photos by author unless otherwise noted

My son came home from school one day early in the school year and announced that his second-grade class would be raising trout. I was immediately intrigued. I'd seen classrooms leafing out with ivy plants, others with caterpillars morphing into monarchs, and plenty containing goldfish and guppy aquariums, but I'd never heard of raising trout.

I soon learned that my son's class would be participating in Trout in the Classroom (TIC), a nationwide program that has been educating students about nature for more than 30 years. TIC has three main objectives: 1) connect students to their local environments and their local watershed; 2) teach them about watershed health and water quality; and 3) get kids to care about fish and the environment.

As a backpacker and outdoorswoman, I know the value of environmental education. As a mother, I can attest to the challenges of finding the balance between outdoor experiences for my family and the lure of modern technology. Smart phones, televisions and computers have crept into our lives over the years, and with them, the inclination to stay indoors and use them. With the presence of screens increasing in households and schools, and natural spaces decreasing in many of our cities, it is more important than ever to find ways for our children to connect with nature. By participating in TIC, schools nationwide have taken a step toward fostering that connection, and I was delighted my son's class would be a part of it.



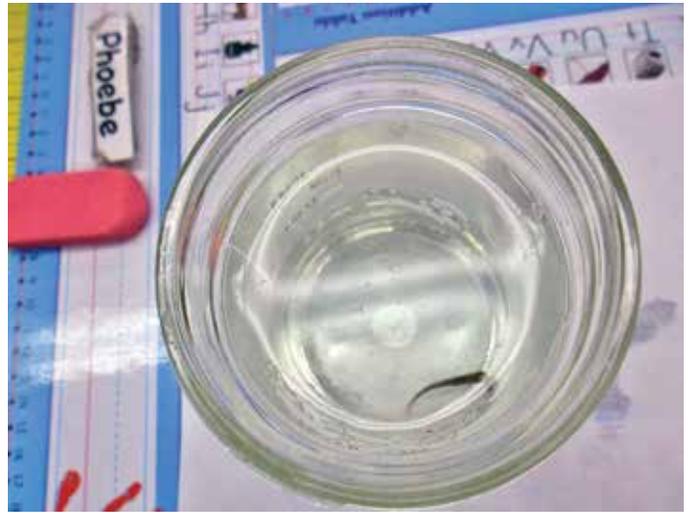
DEC provides fish eggs for several hundred Trout in the Classroom projects across the state.

Trout in the Classroom was established in New York in 1997, thanks to the efforts of a few dedicated anglers, Joan Stoliar of Theodore Gordon Fly Fishers located in New York City, and some committed staff from DEC. It started with four classes of students studying their local watershed and has since grown to include more than 200 classrooms across the state. Schools receive trout eggs in autumn and keep them for six months. They observe the life cycle of the trout as the eggs hatch and grow to become yolk-carrying alevins, then fry, then fingerlings. Students perform water-quality tests and examine the organisms on which trout feed. They study habitat and learn how trout live and survive in their particular environment. When the time comes to release the trout, students visit the place where their trout will live, solidifying a connection to their local landscape.

The more I learned about TIC, the more eager I became to get involved. In November, TIC educators, including Bill Foster, organizer for our area's program and director of Cayuga Lake Floating Classroom, visited the second-grade classes at my son's school. They introduced the program and explained to the kids their role in caring for the fish. Fifty enthusiastic eight-year-olds saw pea-sized, cloudy, yellow trout eggs delivered safely into the cold-water tank. Thus began their stewardship responsibilities.

Schools in the Finger Lakes either receive eggs of brook trout, the official state fish of New York, or brown trout eggs. Both species prefer clear, cool lakes and streams, and spawn in the fall, laying their eggs in shallow nests in gravelly areas. The eggs are covered under a layer of gravel and remain there until they hatch. Mature trout primarily eat insects, but also feed on smaller fish or invertebrates.

Both species face a variety of environmental challenges. Trout are sensitive to water quality and temperature. Populations have decreased due to acid rain, deforestation of the watershed and pollution issues. In some areas of the Adirondacks and Catskills,



Fry stage of trout

the populations have been severely reduced or eliminated. Brook trout also face extensive competition with non-native species. Though the threats to trout are many, programs like TIC create new possibilities for trout to thrive.

In December, Foster returned to my son's school just when the eggs had hatched. He explained that these infant fish are called alevins and that they would remain in the gravel for another week, living off nutrients found in the yolk sacs attached to them. Foster then went on to say that at the end of a week, the alevins would emerge from the gravel as fry—young fish only a few centimeters long. The students seemed excited to find out that at that



Led by artist Camille Doucet, students learn about trout life stages.



TIC educator Bill Foster explains what trout eat.

time they would begin feeding the swimming fry which would be looking for food.

While TIC was getting underway in the school, I learned that an artist friend of mine, Camille Doucet, had worked with the program in the past, so I petitioned her to join the program again. Camille feels that art and science go hand-in-hand, and believes that when you teach a child to draw what they actually see, it reinforces scientific thinking and makes them really see what is happening.

During the fry stage, Doucet made her first visit to the school where she arranged to have a glass jar containing one fish put in front of each student. The assignment was to look closely at the trout fry and draw it. Doucet roamed the room, encouraging, directing and offering her expertise to guide them in their drawings. At the end of the first art session, the children each proudly showed off their scientific illustration of a young trout.

Bill Foster supports this addition to the program, saying, “When I see kids peering at their trout specimens, preparing to draw them, I know they are really observing. And the level of



Trout fingerling just prior to release



A tank full of trout fry

detail that [Doucet] has kids capturing in illustrations is amazing! It opens up a whole different mode of learning.”

The Ithaca school district where I live has participated in TIC for about seven years. For half of that, Leland Collins has brought trout education to his second-grade students. He says the most rewarding thing for him is “Seeing the kids get so excited to learn about the trout—their life cycle, habitat, food, etc. And also seeing them make a difference and have a positive impact on our community.” From their past work with TIC, Collins and the other teachers already have the equipment necessary—tank, chiller, pump, gravel, etc.—to house the trout, and began this year with their curriculum in place for the program.

For schools just starting out with TIC, organizations such as Trout Unlimited can offer support in obtaining the required equipment. A national organization that was formed in the 1960s, Trout Unlimited is comprised of thousands of volunteers and conservation professionals who work diligently at the local, state and national levels to preserve and restore fisheries. One of the organization’s aims is to teach the next generation about the importance of conserving the land and water where they live. Local volunteers may work with teachers to understand the logistics of raising trout (regulations, licenses, etc.), provide help with setup of the equipment, and accompany classes when releasing the fish. At my son’s school, the Leon Chandler Chapter of Trout Unlimited sponsors TIC.

DEC also plays a significant role in the TIC program. DEC has partnered with Trout Unlimited to offer support and leadership for schools. To ensure ecological and legal compliance, DEC has established guidelines for all TIC projects in the state. These include recommendations such as the number of eggs per tank, where to safely acquire trout eggs, and where to get the appropriate permits for the trout release.



Students release the trout into Salmon Creek.

Throughout the winter and into spring, the second-grade teachers guided my son and his classmates as they regularly fed the trout, observed their health and monitored water quality. Foster and other TIC volunteers visited the classes two more times to teach about the food and habitat of trout, and to prepare everyone for the spring release. Camille joined the classes one more time and had the kids draw the trout (now called fingerlings) and compare their observations to their previous work.

By April, spring arrived and the young fish were ready to be released. On a warm, sunny morning, our busload of excited kids arrived at Salmon Creek in Lansing. The classes took turns: studying stream organisms and turbidity with Foster and other TIC educators; observing and drawing the creek habitat with Camille; and exploring the edge of Cayuga Lake with parents and teachers.

After six months, it was time to let the trout go. Students were each given a small container holding one fish. Some kids said goodbye, some wished their trout luck, and one or two even tried to hug the container. As per Foster's instructions, they gently laid the containers in shallow, protected spots of the rushing stream, and tipped the fingerlings into the clear, cool water. It was apparent to the teachers and parents in attendance that the kids had grown attached to their trout.

Thinking back to the TIC goals I learned for the first time just months ago, I knew they had been reached. The kids had learned about their watershed, they understood the need for clean,

unpolluted water, and they grew to care about fish. But Trout in the Classroom teaches so much more. Thanks to teachers, environmental educators, artists and parents, the kids in my son's school were exposed to a program that helped them step out of their daily life and explore the bigger world outside.

Leland Collins knows these are lessons that will carry through the children's lives. "Not all my kids are going to become scientists," Collins says. "A few might, but this program is for more than just those young scientists, it's for everyone. I hope they walk away with a love for learning about science." And after my family's experience with TIC, I have no doubt that they will.

**Amanda K. Jaros** is an Ithaca-based freelance writer whose work has appeared in *Life in the Finger Lakes* magazine, *Pilgrimage*, *Natural Life Magazine*, and *Tompkins Weekly*.

## New York's TIC Program

Trout in the Classroom (TIC) was initiated in New York City by Joan Stolar of Theodore Gordon Fly Fishers who saw shared water resources as a way to connect urban and upstate children. Joan contacted DEC seeking participation and assistance. By raising trout from eggs to fingerlings, TIC teaches students a variety of topics, including the importance of healthy aquatic ecosystems, water quality, and trout biology.

DEC has been an enthusiastic supporter of and participant in TIC since its beginning in New York in 1997. DEC provides classrooms with healthy trout eggs and oversees the TIC program. To keep our stream ecosystems healthy, trout eggs must come from an inspected source of disease-free fish. In addition, participants must have a permit from DEC to release (stock) fish into the wild. Permits may be obtained by a project coordinator or from DEC regional offices.

As future environmental stewards, children who participate in TIC garner an appreciation for and connection with the natural world. For more information on the program, including how your school can participate, visit [www.troutintheclassroom.org](http://www.troutintheclassroom.org).



# VIOLETS

## of New York State



Article and photos by Mike Adamovic

As winter fades away and spring arrives in New York, the ground is quickly covered by a lively tapestry of color. Wildflowers dazzle the eye with innumerable colors, shapes and varying hues. Exploding from the ground in rapid succession, each floral wave is a colorful burst on par with a miniature firework, making a stroll through the understory a captivating experience. But the show is fleeting: these small beauties wither before the overarching trees expand their own buds to greedily snatch the sunlight. Though often overshadowed by other showier and perhaps rarer flowers, the common, yet regal violets are a fasci-

nating genus to study, and shouldn't be dismissed solely due to their profusion.

Many violets share numerous attributes and are difficult to differentiate from one another. Botanists estimate that there are between 500 and 600 species worldwide, approximately 85 of which can be found in North America. Luckily for the casual wildflower enthusiast, only about half of these are common in New York. There's tremendous variation among the community, with many varieties garnering oxymoronic names, such as round-leaved yellow violet and sweet white violet. While a majority live up to their names in appearance, more than a few are anything

but violet, being completely white, pink and even the brightest shade of yellow, with numerous combinations and levels of mixing. All of these attributes aid in their identification.

Yellow violets appear to be the most primitive, with their flowers being the first shift away from the ancestral green. Purple, in contrast, is thought to be one of the most advanced colors. Evolution in progress can be witnessed in the tall, white, Canada violet (*Viola canadensis*), a native to Canada and the eastern U.S. Many botanists speculate that the mostly white flower, often dabbled with minor purplish tingeing on the back of

the petals, is transitioning from entirely white to “violet.” The Canada violet grows throughout the Mohawk Valley in association with the large white trillium.

Violets can be separated into two general categories: those with stems from which leaves and flowers protrude, and those that are stemless, having appendages emanating directly from the roots, with flowers being supported on a thin and usually low, leafless stalk.

In addition to having showy blossoms, certain species possess a trait known as cleistogamy, meaning they are capable of self-pollination by means of tiny, barely noticeable flowers that resemble unopened buds. The term “cleistogamy” combines the Greek ‘kleistos’ meaning ‘closed’ with ‘gamy’ meaning ‘marriage.’ Once fertilization has occurred by means of insects or self-pollination, the seeds are ready for explosive dispersal. After the seeds are fully developed, the pods they’re stored in slowly dry out, with the pod gradually tightening around the seeds, building up tension in the process, similar to the action of a spring. Later, when the pods are disturbed, or sometimes just randomly, the pressure becomes too great and the seeds are shot out like miniature cannonballs. Amazingly, seeds are capable of flying up to 15 feet away from the parent plant. Pretty impressive for such a tiny plant!

Once on the ground, the seeds are further dispersed by ants. Attached to each tiny seed is a fleshy appendage called an elaiosome that’s rich in protein and lipids, but serves no direct impact to the seed’s survival. Like the sweet nectar of a flower, these elaiosomes are tempting treats to insects, and ants in par-



The closer one looks, the prettier violets appear.

ticular are readily enticed to collect them. Once dragged back to the colony, the energy-laden accessory is removed for consumption, and the hard seed body is dumped in a waste pit where it may ultimately sprout. This dual dispersal technique, using both physiological and biological mechanisms for seed movement, proves to be an effective evolutionary strategy, ensuring rapid colonization of available habitat.

Insects aren’t the only ones that appreciate violets’ tasty nature. In fact, humans find nearly all parts of the plants edible. The leafy greens can be collected to create a salad high in vitamins A and C, superseding that of an equivalent amount of oranges. Beginning in the nineteenth century, candied violets gained favor as a dessert garnishment and were widely served. Though their



Typical habitat of the small white violet (*Viola macloskeyi*)

Canada violets



Common blue violets





Some violets are not violet.

popularity has decreased over the years, in some circles they're still a favorite for topping sweet dishes of cake or ice cream. Traditionally, a syrup was also made by boiling the flowers in a concoction of sugar. Apart from sweetening the lips, the syrup is useful as a substitute for litmus paper. The solution turns red in the presence of an acid, green for a base.

To the Haudenosaunee and other eastern Native Americans, the flower is revered as a symbol of love. An Iroquoian myth, akin to the tragic Shakespearian Romeo and Juliet, tells of how two lovers of warring tribes were slain while trying to elope, and where each drop of blood hit the ground, a violet sprouted to commemorate their boundless passion.

While on the topic of romance, it's also interesting to note that violets used to be the traditional flower of Valentine's Day. Almost all bouquets given to loved ones sported purple rather than red. It wasn't until the 1930's that violets began to be supplanted by the thorny rose.



Unicorn-like long-spurred violets (*Viola rostrata*)

Violets were substantial money makers during the early part of the twentieth century. Like other popular flowers that are added to bouquets or home gardens today, violets were prodigiously cultivated in greenhouses by the millions. Rhinebeck, a quaint, pastoral town located along the shores of the Hudson River in southeastern New York, cornered this unusual market. Growers made sizable profits by shipping flowers to New York City, where there was an especially high demand. Rhinebeck's proximity to the city market, and its easy access to the railroad paralleling the Hudson helped make it the "Violet Capital of the World." At its peak, hundreds of greenhouses routinely cranked out thousands of violets per day in the spring—a fast worker could pick as many as 5,000 during a single shift. Eleanor Roosevelt herself often purchased copious amounts of various exotic cultivar varieties from nearby nurseries to line the gardens at her riverfront estate in Hyde Park, just south of the violet hotbed. She was frequently seen wearing intricate violet arrangements, making it a habit to do so at her husband's numerous inaugurations.



Small white violets are sweet-scented.

Next time you're outside in spring, keep your eyes open for the cosmopolitan violets, which can be found growing just about anywhere—from open and sunny backyards to rich, sheltered woodlands, and even in the dampest wetlands. Though small and unassuming, they nevertheless provide a cheerful reminder of the fecundity and diversity of the spring season. As English philosopher Bernard Williams succinctly said, "We may pass violets looking for roses. We may pass contentment looking for victory."

**Mike Adamovic** works at One Nature, LLC and also manages his photography business, Adamovic Nature Photography.



# WHEN BIRDS AND GLASS DON'T MIX

## (and what you can do about it!)

**By Dr. Christine Sheppard**

Photos provided by author, unless otherwise noted.

Not long ago, I was invited to address the “second-grade ornithologists” at an elementary school in Ardsley, NY. They were intensively studying birds: their biology, ecology, life histories, even some bird jokes, and I was there to tell them about bird collisions with glass and how to stop them. When I asked how many students had seen or heard a bird hit a window, almost all raised their hands.

While most people have experienced a bird hitting a window, they tend to think that this is unusual; they don't understand just how common it is. In fact, hundreds of millions of birds die from glass collisions each year in the United States alone. Almost every home kills a few birds every year, and because there are so many homes, this accounts for almost half of the total bird deaths caused by collisions with glass. Adding collisions on low-rise and high-rise commercial buildings brings the total to more than 300 million, and possibly as many as a billion birds killed every year!

Most of the second-grade ornithologists had run into a glass door or wall themselves. In spite of the frequency with which people collide with glass, most people are sure that they can actually see it. In fact, glass is invisible to both birds and people: you can see the dirt on dirty glass, but not the glass itself. But people learn, from a very young age, to recognize cues—such as window frames and door hardware—that tell them glass is there. Even so, in public spaces, glass doors and walls often have a row or two of decals or etching at eye level as a warning.

Unfortunately, birds can't learn the cues that warn people, but birds can learn about particular pieces of glass. When I worked in the Bird Department at the Bronx Zoo, we would smear glass exhibit-fronts with a soap paste before introducing new birds. When we removed the soap after a few days, the birds still knew that a barrier was there. However, birds can't learn about glass in general and their first encounters are often fatal. Birds take what they see literally, so a reflection is as much a destination as what



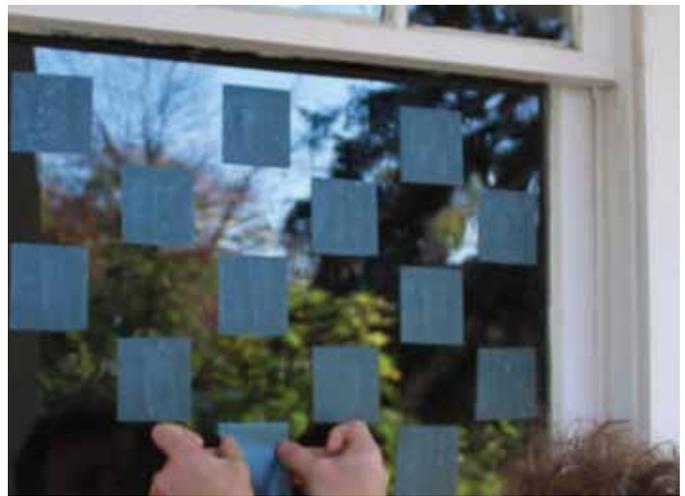
Highly reflective glass is deadly to birds, especially near vegetation.

is being reflected, and plants seen through glass appear accessible. This is why glass kills birds.

While collisions can happen at any time of year, peak numbers occur in spring and fall, when many songbirds migrate to and from their breeding grounds, and some of them for the first time. But many other kinds of birds also hit windows; the largest numbers occur in late spring when chicks first leave the nest, and also in winter as resident birds seek food.



Many birds migrate at night; building lights often confuse them. To reduce sources of light pollution during critical migration periods, Governor Andrew Cuomo initiated “Lights Out New York” in April 2015, whereby state-owned buildings will turn off non-essential outdoor lighting during peak bird migration periods.



Homeowners can use decals and other items on their windows to make them more bird friendly.

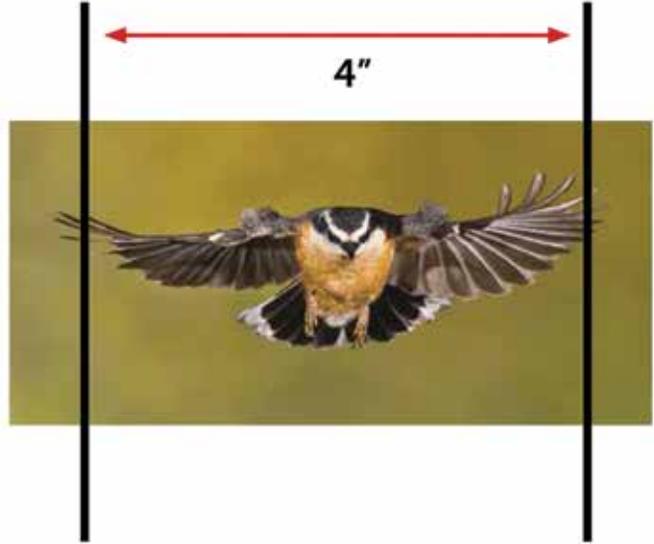
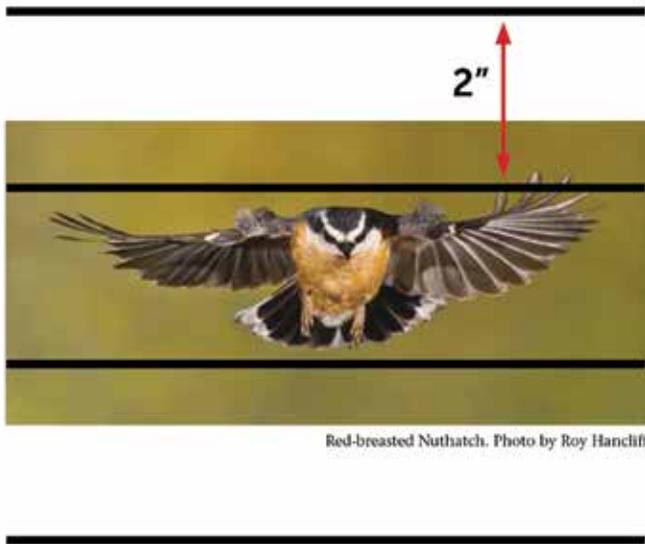
So what can we do about this problem? First, it may help to understand some basic bird biology. Birds and people don’t “see” things the same way. We have eyes in the front of our heads; we tend to see the world as something in front of us, and we have good depth perception. Many birds, on the other hand, have eyes on the sides of their heads. As a result, they don’t have much 3D vision. But their eye placement rewards them in other ways: they have a field of view that extends to the side and sometimes behind them; this can be very helpful to make sure predators can’t sneak up on them. On the other hand, birds aren’t necessarily always looking where they’re going.

Birds see many more colors than we can, including ultraviolet light. But we can distinguish objects from farther away than can many birds. This means that in most cases, if people can’t see something, birds can’t see it either. So signals warning birds away from glass may need to be fairly obvious to people as well. So much for the invisible (to people, anyway) bird warning system!

What about the role of light in collisions? Birds are attracted to light. If a bird gets into your office or house, you should darken the room but leave one bright window open—the bird will usually fly right out. We don’t really know why this is; maybe going towards light gives a bird the best chance of finding its way out of various predicaments. But birds did not evolve with humanity’s artificial night lighting, many times brighter than moon or stars, and it causes them real problems. While some negative effects have been shown for resident birds, night migrating songbirds face the most serious impacts. In some cases, particularly where a bright light is surrounded by darkness (as with some cell towers), impacts are direct. Once attracted to the light, birds are apparently unable to break away and may fly in endless circles or collide with guy wires and other structures.

The effects may be less direct in the giant pools of light that are our cities at night; light brings birds into the built environment as they finish a flight stage and return to earth. But

Birds won't usually fly between horizontal lines 2" apart or vertical lines 4" apart



when the sun comes up, the birds start flying around, looking for food to replenish their energy supplies, and this is when most collisions with glass on buildings takes place. Attracted to vegetation, where insects and berries are likely to be found, birds fly towards reflections as well as plants, with tragic results.

Back at home, windows near bird feeders are the most likely to kill birds, so those windows should always be made bird-friendly. Luckily, there are many different ways to make windows safe for birds. One of the simplest and most effective means is something many homes already have: a screen on the outside of the window. Screens can virtually eliminate reflections, and as long as they are an inch or two from the glass, will cushion the impact if a bird does happen to fly into it. For picture windows and other areas where the view is important,

there are many different kinds of motorized external shades and screens, some even using solar power. Using a remote, the shade can be lifted when the room is in use, and closed when the room is empty. This can also enhance security.

Besides using real barriers, we can reduce collisions by making birds believe that a barrier exists. Tests have shown that most songbirds won't try to fly between parallel vertical lines that are 4" apart, or between horizontal lines that are 2" apart. This makes sense, based on the body size of many birds. It also makes sense that the bigger a window pane is, the more likely it is to kill birds. Colonial style windows, divided into several small panes by mullions, are safer, although not as safe as the 2" or 4" spacing.

But there are many other ways, ranging from cheap, quick and simple to expensive, sophisticated and long-lasting. What about



External screens or closely placed rods help keep birds from flying into glass.

Vertical line spacing on these windows reduces the likelihood of bird strikes.



putting something on the inside of your window? There's a very easy way to tell whether or not this will work. Put a post it, or a piece of tape or paper on the inside of your window. Then, every hour or two, starting at sun up, go out and see if you can see it. If you can, birds can, too.

However, reflections exist on the outside surface of a piece of glass and can hide what's inside, so the most effective solutions are put on the outside of a window. One quick, easy and cost-effective way to put a pattern on your window is using tempera paint. The paint is inexpensive, non-toxic, can be removed with water and a sponge, and lasts outside for a surprisingly long period of time. You can use a brush or a sponge and apply a design free hand, or use a

stencil, taped to the inside of the window, to guide your brush on the outside. You can even change your design to recognize changing seasons or holidays!

Do decals work? The idea of putting decals on windows goes back a long way, to an animal behavior study that involved dragging a + shaped silhouette back and forth above a pen of geese. The geese acted scared when the shape moved from left to right, but not when it moved from right to left, and the scientists decided that meant that the birds recognized and would avoid birds of prey in flight. This turned into the idea that a decal shaped like the silhouette of a diving raptor—a falcon attacking a smaller bird, for example—would make birds avoid windows. Unluckily, birds don't recognize sil-

houettes; they treat a single decal as something to fly around. Decals will work, however, if you use that 2" or 4" spacing. You can find lots of different types of decals, and you can also use tape, stickers, gel clings; whatever your imagination dreams up, as long as birds can see it.

Whether at a winter feeder in January, with their dawn chorus in May, or in a dooryard nest box in June, birds bring a lot of joy to our lives. With a little effort on our part, we can give back to them while we enjoy their presence.

**Dr. Christine Sheppard** is bird collisions campaign manager for American Bird Conservancy.

**How You Can Help**—American Bird Conservancy (ABC) is committed to achieving conservation results for native birds and their habitats throughout the Americas by tackling the toughest problems facing birds today. For more information on what you can do to help prevent bird collisions at your home, visit ABC's website at [abcbirds.org](https://abcbirds.org), and search bird collisions. ABC also publishes *Bird-friendly Building Design*, the definitive guide to designing buildings to reduce bird collisions. You can download it or buy a copy at: <https://birds.ultracartstore.com/>



By DEC Forest Ranger Scott Sabo with Bernadette LaManna  
Photos by DEC unless otherwise noted

Every year as warmer temperatures herald the beginning of spring, thoughts turn to outdoor activities: picnics, barbecues, and...brushfires?

Spring cleaning often includes yardwork, tidying up what winter's receding snows have left behind: twigs, leaves and occasional branches. Somehow, leaves reappear even after last autumn's raking. You can compost them or bag them, but remember—burning brush or debris is prohibited from mid-March through mid-May, the high-risk fire season.

In NYS, open burning is the largest single cause of spring wildfires—uncontrolled fires that spread through vegetation. Because wildfires affect everyone, residential outdoor burning during the high-risk season has been prohibited since 2009. Consequently, the average number of spring fires per year

decreased by more than 40 percent. Even during that decline, however, a wildfire covering nearly 1,000 acres burned through Long Island's Central Pine Barrens, destroying several homes and a fire engine.

DEC's Division of Forest Protection (forest rangers) is New York's lead agency for wildfire mitigation, but the role that homeowners play in preventing fires is even greater. According to data from 1988 through 2012, humans caused 95% of wildfires in the state, and debris burning accounted for 35% of those fires.

Wildland fire management, including prevention and suppression, has been a traditional role of forest rangers, who were originally known as fire wardens. Rangers are educated and equipped for immediate response to wildfire outbreaks. The following is Forest Ranger Scott Sabo's personal account of a spring 2015 wildfire in Ulster County.



Rangers perform a back burn to halt the fire's spread.

**Fuel, weather and topography:** these three elements comprise the wildland fire “triangle” and dictate fire behavior. Early in my wildland firefighting career, I learned that when extremes of these elements meet, I’d have my hands full trying to control the resulting fire.

On Sunday, May 3, 2015 in DEC Region 3, the three elements for a wildfire aligned. Early that day, I heard a few rangers calling dispatch to let them know they were “on scene” of a wildfire near Roosa Gap State Forest in Sullivan County. Their tone and word choices told me serious work lay ahead. “Upslope running fire to the north” and “Get engines to Fire Tower Road for structure protection” particularly stood out. I also learned that a couple of other rangers located between me and the fire had already been dispatched to help.

Experienced and well-trained rangers were on the Roosa Gap fire, and dedicated fire departments with water tankers were in position to protect houses. Given the weather forecast, fuel, topography and size of the fire, it seemed the situation was well in hand.

As I headed home, I planned to pack a bag with everything I’d need for a night’s work on the fire line just in case. Pulling into the driveway, I received a call from my captain and learned I’d be packing even faster than I’d thought.

Things happen very quickly where fire’s concerned, and what had begun as nothing more than a stubborn leaf fire had suddenly become a raging inferno, with 15-foot-high flames. The fire had escalated soon after an unexpected but steady 8-10 mph wind began blowing from the west.

I drove to the fire outside my assigned patrol area; it was easy to locate because of the large column of smoke rising several thousand feet. I’ve seen some impressive smoke columns from fires I’ve worked in Montana, Wyoming, California and Wash-

ington. This column wasn’t quite as big as those, but it was the biggest I’d ever seen in New York!

When I arrived, firefighters were trying to keep flames from jumping a narrow road and patrolling for spot fires across the way. Water engines (trucks) were stationed in backyards and driveways to protect houses, and everyone was busy. There wasn’t much need for me there; my work was in the woods.

After reaching the command post, I was assigned to scout the fire’s north flank. The west wind had pushed the fire east, up slope and over the ridge, where it had jumped Fire Tower Road north of the last residence. Volunteer fire departments had done great work—no one had been injured, and no structures had been lost. A crew of firefighters from Wurtsburo was working uphill, trying to dig a line around the fire. It was burning slowly on the side of the hill instead of running up it.



Heavy equipment was brought in to construct a control line.



DEC Forest Ranger Robert Mecus directs ground operations from a fire tower in the 'Gunks.

I requested another crew, and a ranger and firefighters from Port Jervis quickly assembled and followed me wherever I went, flagging areas with surveyor's tape. Everything was coming together, but as I neared the top of the ridge, I saw five-foot flames moving through scrub oaks. There was no way to stop the fire due to the intense heat, but, worse, I couldn't find a safe place for crews to get ahead of it. Consequently, crews, Utility Task Vehicles (UTVs) with water tanks, DEC fire wardens and I dug a line from the top of the ridge down, trying to prevent the fire from reaching more fuel. Occasionally the fire torched full-grown pitch pines, and flames shot 80 feet upward. We stationed a fire warden in the Roosa Gap fire tower as a lookout and to help direct our movements in relation to the fire. Even with the aid of water dropped from the NY State Police helicopter, we couldn't punch through the dense forest and get around the fire before nightfall.

Early the following morning, several of us kept an eye on the fire from the fire tower. Volunteer fire departments prepared their equipment for another run, and rangers began working on logistics for the day's activities.

Mike Wentland Photography



Although the fire threatened several residences, none were lost.

On Monday, May 4, we faced another challenge: the fire had progressed north and moved a few hundred yards along the top of the ridge. Ranger-led crews were accessing the west flank, lower on the ridge off Route 209, while other rangers and crews were headed north, off Old Mountain Road. Bulldozers cut a wide line ahead of the flames—a task that would have been impossible to complete in time with hand crews. In the fire tower, I served as a lookout for crews in my area and provided weather readings every hour.

The wind was relentless, changing direction unexpectedly and increasing in speed as well. At sunrise, sustained winds of 16-18 mph had begun blowing from the north. At 11 AM, it suddenly veered and started coming from the west, pushing the fire to the very top of the ridge. Within 20 minutes, the wind began blowing from the north again, but it increased to 25-30 mph and remained at that velocity for the rest of the day.

As a large black smoke column appeared and rose thousands of feet, it made me wonder whether I was really in New York. I watched in disbelief as the 130-foot wind-blown flames scorched entire stands of trees and began threatening my crew and equipment. I like to think that I calmly and professionally radioed to tell them to return to the safety zone created earlier by the 'dozer. But later they joked that I was yelling loud enough to be heard at Old Mountain Road, which was two miles away.

This type of fire behavior is called a "blow up," and everyone who worked on that fire or who lives in the area would tell you that's exactly what the fire did—blow up. Within 30 minutes, it had pushed north nearly a mile and a half, all the way to Ulster County Route 52!

The following days became a blur of early mornings and late nights. They included air tankers dropping 800 gallons of water to slow the fire and Black Hawk helicopters with collapsible buckets knocking flames down in areas difficult to reach by those on the ground. Firefighters used small controlled burns or



Extending thousands of feet into the air, the smoke plume was visible for miles.

“back burns” near homes to prevent uncontrolled wildfire from getting too near each residence.

For many of us, this was among the biggest and most complex fires we’d seen in New York. At times, nearly every ranger from Region 3 was working the fire, as were rangers from five of DEC’s eight other regions. The State Incident Management Team, NYS Police Aviation, NYSDOT, Albany Pine Bush crews, Mohonk Preserve staff and air tankers from New Brunswick, Canada, all pitched in. Countless volunteer firefighters and companies from



Forest Rangers Slade and Kreft



Rangers, including Praczkajlo, DiCintio, Mecus, Carpenter, Slade, Jackson, and Meade, provide the morning operational briefing at the Incident Command Post.

many counties responded without hesitation to a situation completely outside their normal experience. After nearly a week, and at great expense of time and resources, we finally contained the fire. Not a single residence was burned, and no one was killed. A few injuries occurred on the fire line, but everyone survived.

Although we averted tragedy, one careless and illegal act—a backyard open burn—had jeopardized the safety of citizens, emergency responders and nearly 100 homes for almost a week. Many responders like me are consoled by memories of the fellowship and support received at the time. But the fact remains that everyone affected also will remember this potentially deadly incident was completely avoidable. All it would have taken was some thought and restraint.

Epilogue: By mid-May 2015, 110 fires had burned roughly 3,600 acres in Sullivan and Ulster counties. Because dry conditions persisted, DEC extended the outdoor burn ban beyond the usual May 14<sup>th</sup> cutoff date.

**Scott Sabo** is a DEC Forest Ranger assigned to the lower Hudson Valley / Catskill Region. **Bernadette LaManna** is an editor in DEC’s Office of Communication Services in Albany.





# GIVING BACK

By Laura DiBetta and Robin Dropkin

## I Love My Park Day builds next generation of park stewards

Every time Tommy Finkin visited the beach at Sunken Meadow State Park on Long Island last summer, he looked at the flowers near the entrance with pride. Just before the unofficial start of summer, Tommy and his mom, Katherine Vasilopoulos, spent the day planting flowers, building picnic tables and painting lifeguard chairs.

“All summer long my son marveled that his flowers were there. It gave him such a sense of accomplishment and ownership,” says Katherine.

Tommy was one of thousands of volunteers pitching in that first Saturday in May for the annual I Love My Park Day, an event to celebrate and enhance New York’s state parks and historic sites.

### New York’s Conservation Legacy

The creation of New York’s remarkable park system dates back more than a century. It was the work of many: some prominent, and others just ordinary citizens who simply believed in the importance of parks. These friends and supporters contributed their wealth, political clout, brainpower, skills and sweat to create a park system that has brought the joys of the outdoors to hundreds of millions of New Yorkers.

This park legacy is a responsibility handed down from one generation to the next, with each generation privileged to enjoy it—but obligated, too, to pass it on in better shape than they found it.



Governor Cuomo shows his support for parks by participating in I Love My Park Day.

In the spring of 2010, however, for the first time in the system’s 125-year history, this legacy was in jeopardy. Fiscal troubles caused the temporary closure of some 88 parks and historic sites. The closings turned into a call to action for all who love and support our state parks. New Yorkers, led by Parks & Trails New York, a statewide park and trail advocacy organization, rallied in support of keeping parks open and, on the day before the Memorial Day weekend, the governor and legislature restored enough funding to reopen the entire system.

The threat of closure led to a renewed recognition of the importance of our state parks and historic sites. I Love My Park Day is one way New York is harnessing that support and enthusiasm—honoring our extraordinary park legacy by establishing a way for the current generation to step up and do their part.

### People Love Their Parks

Since its creation in 2012, I Love My Park Day has been a tremendous success, engaging thousands of New Yorkers in celebrating and improving New York’s state parks and historic sites. Volunteers from every region of the state look forward to participating in local park projects—planting trees and flowers, restoring trails and wildlife habitat, enhancing public access to park resources, and performing a variety of other site maintenance and improvement activities.



Tiffany Soricelli, PTNY

Parks & Trails New York organizes I Love My Park Day activities in cooperation with the Office of the Governor, the state Office of Parks, Recreation and Historic Preservation, and local park Friends groups.

In 2015, I Love My Park Day saw more than 6,500 volunteers contribute 16,000 volunteer hours to improving New York’s state parks. Those volunteers added their muscle to nearly 200 cleanup, improvement, and beautification projects at 95 state parks and historic sites. Since its inception, the event has tripled in size and continues to grow in popularity, drawing participants of every age and walk of life. Even Governor Cuomo has participated! From Girl and Boy Scout troops and service fraternities to corporate volunteer teams and garden clubs, I Love My Park Day has tapped into New Yorkers’ desire to give back.

And the results are becoming more and more obvious. In addition to the usual cleanup and tree-planting projects, volunteers are helping to build bird blinds and bridges, restore historic springs, widen trails to make them more accessible, and much more.

### Welcoming New Partners

Among the exciting developments initiated by I Love My Park Day are the partnerships that have emerged, both statewide and at the local level.

At Moreau Lake State Park in Saratoga County, for example, park staff and the Friends of Moreau used a grant from the Southern Adirondack Audubon Chapter to pay for lumber, as well as stain and brushes donated by a local paint store, to build a waterfowl observation blind and interpretative panels. Friends of the Old Croton Aqueduct and park staff decided to use the first I Love My Park Day to launch a new invasive vine-removal project. Since then, the Friends have made numerous new connections with other organizations, received support from local municipalities, and partnered with a local business which donated employee time and machinery to the event.

On the statewide level, New Yorkers Volunteer—a program supported by the Governor-appointed NYS Commission on National and Community Service—joined the I Love My Park Day effort as a Premier State Partner in 2013 to help recruit volunteers, promote the initiative and engage AmeriCorps members to support projects across the state. This year, the Excelsior Conservation Corps, a new AmeriCorps environmental education and stewardship program for 18- to 25-year-olds, will work on I Love My Park Day projects as part of their hands-on learning experience. Corporate partners like AT&T, Con Edison, Brookfield, and Harney & Sons Fine Teas have been invaluable in providing resources to promote the event and engage volunteers, and encouraging teams of employee volunteers to give back.

As we approach the fifth anniversary of I Love My Park Day, it seems only natural that the scope of the event would expand to welcome treasured outdoor spaces in the Adirondack and Catskill Parks managed by DEC. We're also pleased to add several national parks in celebration of the National Park Service's centennial.

As the event grows, so too do opportunities for New Yorkers to give back, strengthen bonds, build memories, and instill a sense of stewardship in the next generation.

### Creating Future Stewards and Lasting Traditions

Now 15, Tommy Finkin has returned to Sunken Meadow State Park on I Love My Park Day each year and has worked with the same state parks employees for three years in a row. He has



Volunteers, like the Vasilopoulos family, build picnic tables on I Love My Park Day.

become an “old pro” and, at the 2015 event, was asked to help others who had come for the first time. He showed other volunteers how to properly construct a picnic table. According to his mom, Tommy is already talking about applying for a job with NY State Parks.

Seeing how excited his big brother and mom were about participating, Tommy's younger brother Alexios asked to skip Greek School so he could join them last year. And this year, Katherine reports her 12-year-old daughter is also already asking to join in on the fun.

She sums it up, “We receive far more from this experience than we give.”

First-time *Conservationist* contributor **Laura DiBetta** is director of parks program and government relations, and frequent contributor **Robin Droppin** is executive director of Parks & Trails New York.

## I Love My Park Day

Saturday, May 7, 2016

Join us for an exciting statewide event to celebrate and enhance New York's parks and historic sites.

To find an event near you and register to give back on I Love My Park Day, visit:

[www.ptny.org/ilovemypark](http://www.ptny.org/ilovemypark)



# KEEPING TRACK

## Cooperative diary program helps biologists manage Finger Lakes fisheries

By Pete Austerman

Don Beusman has been keeping a diary for more than 40 years. He faithfully fills it out on a regular basis. But Don's diary isn't a typical one—it's an angler diary: a place to record information about the trout he catches on Canandaigua Lake. In some years, Don has reported catching more than 200 trout. Many of these fish

are returned to the water unharmed, while others provide a tasty meal for Don's family and friends. Either way, the information recorded from his catch is very valuable to DEC fisheries biologists.

Don is one of many contributors to the Finger Lakes Cooperative Angler Diary Program. Begun on Cayuga Lake

in 1963, the program helps fisheries biologists evaluate the effectiveness of DEC's fish stocking program. At that time, DEC raised thousands of lake trout at its Bath Fish Hatchery for stocking in the Finger Lakes, and angler diaries provided a good way to assess fishing success. Over the years, the angler diary program was

Daniel Mulhall



Ashleigh Read holds a trout she caught while trolling on Canandaigua Lake.

expanded to include many other fish species. Today, DEC conducts cooperative diary programs on all 11 Finger Lakes.

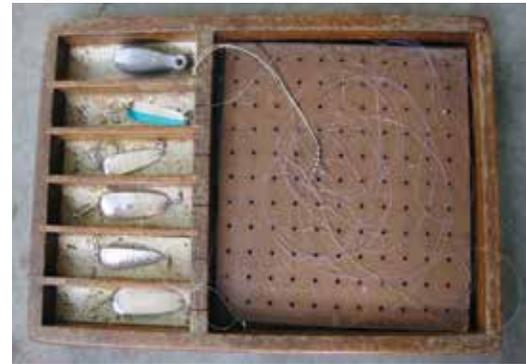
Fisheries biologists are always looking for effective and efficient ways to gather data that will help them evaluate fish populations. Different methods are used depending on the species of fish and the purpose of sampling. For instance, biologists may perform gill netting to evaluate the success of lake trout stocking, conduct a stream creel survey to measure the success of brown trout stocking, or do electrofishing in a lake to assess bass fishing regulations. These are all great methods for studying a fishery, but they require a lot of time and resources. One of the more efficient methods used to gather information on a fishery is enlisting the help of volunteer anglers, and these folks have been doing just that on Canandaigua, Keuka, Seneca, Cayuga, Owasco and Skaneateles Lakes for more than 40 years.

Each angler cooperator is given a diary booklet in which to record information from each fishing trip. DEC asks anglers to record the lake they are fishing, what type of fish they are fishing for, how long they fished, how many fish of each species they caught (including if they were kept or released), and the size of the fish caught. This information allows biologists to calculate catch rates (how many caught per hour) of various fish species. In some cases, DEC also asks anglers to record any missing fins from fish they catch. Missing fins are usually the result of fin-clipping,

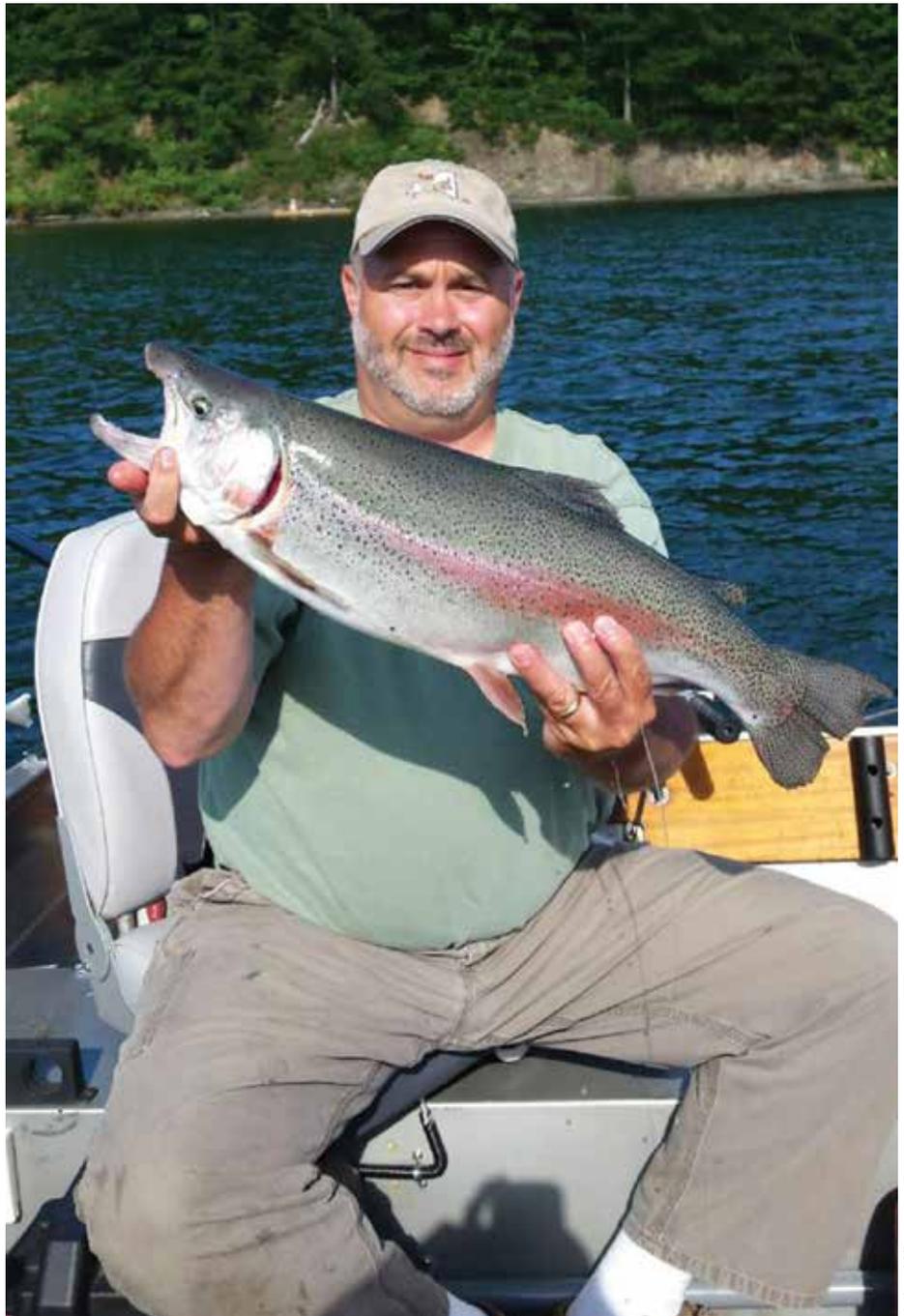
a practice biologists use to mark fish at a hatchery before they are stocked. Fin clip information can tell biologists if a fish is stocked or wild and may also indicate when and where it was stocked.

At the end of the fishing season, anglers return the booklets to DEC. Fisheries personnel compile the records from each cooperator and then write a summary which is sent back to cooperators along with a new diary for the following

Don Beusman



Don made this Seth Green rig box to hold his lures and leaders.



Nathan Miller

Diary cooperator Chuck Miller proudly displays the rainbow trout he caught on Hemlock Lake.

Sue Beusman



Don Beusman holds his 17.5 lb. lake trout he caught on Canandaigua Lake.



Ashleigh prepares to reel in a trout on Canandaigua Lake.

fishing season. In addition to the valuable information collected, the program also opens lines of communication between DEC fisheries staff and the anglers who value the fishery.

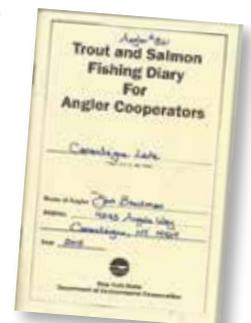
Over the years, data from this program has helped identify some important changes in the Finger Lakes. One example is when lake trout catch rates increased dramatically following the invasion of zebra mussels in the Finger Lakes in the 1990s. At the same time, the average size of the lakers being caught was declining. The information collected from the angler diaries helped biologists figure out that the invasion of zebra mussels had reduced the food supply for adult trout. Catch rates were high because there were a lot of hungry trout with little to eat. While some anglers enjoyed the high catch rates, most were worried about the lack of larger fish being caught. Based on this information, biologists decided to reduce the number of stocked lake trout in some of the Finger Lakes. They hoped that lake trout would grow better if there were fewer of them competing for the limited food resources. This strategy appears to have worked as lake trout growth improved and catch rates are still at acceptable levels. These changes would have been much more difficult to identify if the diary program had not been in place.

Angler diaries are invaluable to biologists, but they also help anglers as well. Anglers can refer to past diaries to see patterns that might increase their odds of landing more fish. Don finds that referring to his diary records helps remind him which

methods work best during different times of the year and at different locations. A review of his diaries show that he uses a few different methods that have been popular with trout anglers on the Finger Lakes for more than 100 years: the Seth Green Rig and hand line trolling with copper line, known as “pulling copper.” Both methods are types of trolling whereby anglers pull lures through the water behind a boat. This allows a lure to mimic the swimming action of common baitfish such as alewives and rainbow smelt. The Seth Green Rig allows multiple lures to be pulled at a variety of depths, whereas the “pulling copper” method involves one large, heavy copper line that allows the lure to swim near the bottom. Don’s all-time favorite: pulling copper.

If you fish the Finger Lakes, consider keeping an angler diary. You’ll be helping biologists monitor local fisheries, while also documenting what does and does not work so you can fine-tune your own fishing. For more information on joining the program, please contact either the DEC Region 7 or 8 Fisheries offices at (607) 753-3095 or (585) 226-2466, respectively.

**Pete Austerman** is an aquatic biologist in DEC’s Avon office.



Angler diaries provide DEC biologists with valuable information on a lake’s fishery.



# SEARCHING FOR STRIPERS

## —A glimpse into New York’s striped bass fishery

By Jessica Steve

Many saltwater anglers know that when spring comes around, so do the stripers. Striped bass are one of the most iconic fish in New York waters. Easily identifiable by the dark horizontal stripes on their sides, these bass are an angler’s dream: they’re fun to catch, good to eat, and they get big. Now that it’s April, the striped bass recreational fishery is open in the Hudson River north of the George Washington Bridge. The recreational fishery south of the George Washington Bridge opens April 15.

Striped bass are New York’s official saltwater fish, but they aren’t always found in saltwater. These top predators

are anadromous, which means they live in saltwater and move to freshwater to reproduce. The effect of these fish migrating between the ocean and their freshwater spawning grounds in the spring can be felt up and down the entire east coast, from Canada to Florida. Anglers eagerly watch the waters, waiting for their return, perfecting a rite of spring that has been practiced for decades.

Unlike some fish species that reproduce only once or twice in their lives, striped bass can live and spawn for 30 years, growing all the while. The New York freshwater striped bass record was set in



Close-up of a tagged striped bass

Jessica Steve



Staff from DEC's Bureau of Marine Resources and a student intern process caught striped bass as part of our study. Clockwise from upper right: graduate student Angela Schimizzi, Jesse Hornstein, Brandon O'Brien, and the author.

2014 by a fish caught near the Newburgh-Beacon Bridge that weighed 60 pounds and measured 53 inches long! The largest saltwater striped bass from New York is a 76-pound fish caught off Montauk in 1981. Huge bass like these are almost always female.

New York has a long history of striped bass fishing. In addition to recreational fishing, which became very popular after World War II, generations of commercial fishermen have caught striped bass in the waters around Long Island. The commercial fishery boomed in the 1970s, but overfishing and industrial pollution of the

Jessica Steve



Technician Justin Pellegrino removed some scales.

Hudson River spawning grounds caused the striped bass population to collapse in the 1980s. State and federal fisheries biologists put strict management practices in place, closing the commercial fishery from 1985 to 1989. After years of conservation management, the striped bass population was declared restored in 1995. Though striped bass are now considered a success story, DEC continues to manage them by regulating the size and number of bass caught and the length of the fishing season.

DEC scientists also monitor striped bass in waters around western Long Island. Every year since 1984, staff catch striped bass of all sizes, from large adults to tiny young-of-year bass that are just a few weeks old. We measure and weigh the fish we catch, tag them, and remove a few scales (don't worry, they grow back). Then we return every fish safely to the water. Like a tree, the scales have visible rings, which we count to determine the fish's age. We use the tags to track where a fish has been, so keep an eye out for stripers with bright pink tags!

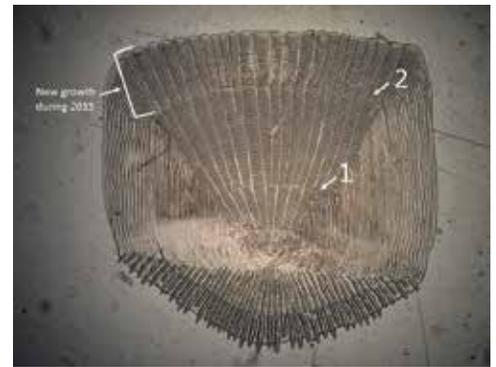


Image of a scale from a two-year-old striped bass, shows age rings.

You can help monitor striped bass in New York by joining one of our cooperative angler programs. By participating in these programs, recreational anglers send us logbooks of their fishing trips and any striped bass scales they collect. If you fish the Hudson River and/or the waters around Long Island, consider becoming a cooperative angler. This program has existed for more than 30 years, it's free to join, and the information is invaluable to us. If you want to learn more about our striped bass studies or the cooperative angler programs, contact biologist Jesse Hornstein at (631) 444-0714 or [jesse.hornstein@dec.ny.gov](mailto:jesse.hornstein@dec.ny.gov).

Remember that if you're going to fish for stripers, you need to enroll in New York's Recreational Marine Fishing Registry (visit [www.dec.ny.gov/permits/54950.html](http://www.dec.ny.gov/permits/54950.html) for more details). Regulations can differ depending on where you are and what you fish for, so make sure you know the size and catch limits before you go. For more information on striped bass fishing in NYS, visit [www.dec.ny.gov/outdoor/fishing.html](http://www.dec.ny.gov/outdoor/fishing.html). We wish you the best of luck this fishing season!

Originally from the Albany area, **Jessica Steve** currently lives in North Carolina. She worked in the Striped Bass Unit in DEC's Bureau of Marine Resources, and recently went to work for the NC Division of Marine Resources.

# BRINGING BACK BROOKIES

—biologists return native brook trout to Adirondack pond



By Rob Fiorentino with Eileen Stegemann  
DEC photos

Monday morning was beautiful. The air was still and crisp, and the sky clear—perfect for the helicopter to fly to the remote pond. Today’s project required the use of thousands of pounds of equipment, and the helicopter would make ferrying the items to Lower Sargent Pond in Hamilton County much easier.

Space on the helicopter was limited, so while our gear got a free ride, several of us hiked the 2.2-mile-long trail from North Point Road to meet the helicopter at the pond and unload its cargo. Fortunately, unlike many Adirondack trails, this one was relatively flat, making it an easy hike.

We were here to reclaim this pond so that brook trout could thrive once again. To do this, we would treat the water with rotenone—a chemical that kills fish. With all the non-native fish removed and no longer competing for resources, we could stock the pond with native brook trout. Reclaiming the pond is the best way to ensure the brook trout population will thrive. And with

Use of a helicopter was essential for ferrying in and out thousands of pounds of equipment.

only a small fraction of New York’s historic brook trout waters still containing native fish communities, reclaiming waters like Lower Sargent Pond is essential to the survival of this native species in our waters.

## A Fishery in Trouble

Lower Sargent Pond had once been known as a premier back-country fishing destination. Hundreds of anglers would hike in or be flown to the pond each year in search of trophy Little Tupper strain brook trout. But time and human influence had changed the fishery so that anglers were hard-pressed to catch any brookies.

During the last century, a variety of fish species were introduced into Lower Sargent Pond. Some were legally stocked, while others likely immigrated from downstream waters. A 1933 biological survey collected brook trout, lake trout, white sucker, smallmouth bass and yellow perch. In 1955, no brook trout

**“...the effect of introducing non-native species was devastating to the native species in this ecosystem.”**

could be found; only lake trout, common shiner, white sucker, brown bullhead, pumpkinseed and yellow perch lived in the lake. To change this, the Conservation Department (DEC’s predecessor) performed the first reclamation on Lower Sargent in 1956. During the next 20 years, it was reclaimed several more times, each time to address the infiltration and overabundance of competing fish species. Following improvements to a fish barrier built by the Conservation Department in the 1960s, the last reclamation in 1971 successfully produced a quality brook trout fishery that persisted into the 2000s.

By 2002, anglers began reporting catching many 6- to 10-inch largemouth bass, and only larger brook trout. The absence of smaller brookies indicated that bass were likely eating young brook trout, affecting the trout population’s ability to maintain itself. In addition, adult bass compete with adult brookies for the same food items. By 2012, DEC sampling turned up numerous bass, golden shiners and only a few large brookies. If we wanted to remove the non-native fish and return this pond to its former status as a premier brook trout water, something had to be done.

## Reclamation Time

On Monday, October 21, 2013, a team of conservation professionals gathered at Lower Sargent Pond to prepare for the reclamation. Reclaiming a pond this size is a big job, requiring numerous personnel. DEC staff from across the state and pilots from the State Police Aviation Unit all helped out. Preliminary work had already been done, including removing a number of beaver dams to reduce the volume of water that needed treatment.



DEC biologist Bill Schoch (now retired) dons his gear prior to the start of the reclamation.

Considering all the preparatory work that had to be done, one DEC wildlife technician had already made the trip to the pond on foot 10 times! It was a week of long days, but well worth the effort.

**Day 1, Monday**—We brought all the equipment to the lake, including eight boats! This required 22 helicopter trips. We carried 20 cans of rotenone at one time in a chemical box. With bad weather expected to move in tomorrow, we couldn’t have done this without the helicopter.

**Day 2, Tuesday**—Bad weather: wind-driven rain and sleet. Fourteen of us hiked in and used three deep-pumping boats to apply 100 gallons of rotenone at depths of 22 to 27 feet. Equipment and motor issues delayed the start of all three boats. One pump had issues with airlock on the outlet hose; we had to hold the line horizontal in the water to allow the air to escape. Other pumps worked well.



On the fourth day, staff performed a bioassay to test the effectiveness of the reclamation treatment.



Remote Adirondack ponds like Sargent offer anglers unparalleled back-country experiences.

**Day 3, Wednesday**—Weather was overcast. Twenty-five of us walked in to assist with the surface application of 720 gallons of rotenone. We used six boats to treat the main body of the pond, and one boat to treat the shoreline area. We encountered a number of issues including clogged lines and valves, and engine trouble. The two-person crew in the canoe found a small inlet and one other spring that needed extra treatment. We treated approximately one mile of the inlet and side tributaries. We sent a number of empty cans and a broken motor out on the chopper.

**Day 4, Thursday**—We performed a bioassay to assess the effectiveness of the treatment. The bioassay went well, but indicated we needed to apply more rotenone to the pond's surface. We completed the additional treatment.

**Day 5, Friday**—We removed all of our equipment. It took thirteen flights to get everything out.

## Future of a Fishery

The following summer, we returned to Lower Sargent Pond to set nets and see how the reclamation had worked. We captured 20 central mudminnows—very hardy fish with a high tolerance to rotenone—but none of the other fish species that we had targeted for removal. This was encouraging. Mudminnows don't affect the growth and reproduction of brook trout.

In September, we stocked the pond with Little Tupper strain brook trout. Because of the pond's remote location, we stocked the fish by helicopter. It was the first of three planned annual stockings. All fish were fin-clipped so they could be identified in the future.

There is no way to truly know how largemouth bass gained access to Lower Sargent Pond. One possibility was a person simply moved fish from below the fish barrier to above it. Or it could have been a misguided intentional stocking to create a bass fishery. Regardless, the effect of introducing non-native species was devastating to the native species in this ecosystem. It is a problem environmental professionals encounter all too often, in both aquatic and terrestrial environs.

Many lake associations and community organizations are currently battling the spread of non-native species (see next article). Efforts to control species such as purple loosestrife and Eurasian watermilfoil mirror the battles fought by fisheries biologists in the Adirondacks since the 1950s. The hope is that everyone will come to value all our native species and support the varied efforts to preserve that heritage. The battle can only really be won by education that promotes awareness and good stewardship.



## When to Reclaim a Brook Trout Water

One of the greatest threats brook trout face is competition with non-native species like bass. The Adirondack Lake Survey Corporation conducted surveys on nearly 1,500 smaller Adirondack lakes and ponds from 1984-1987. Interestingly, surveyors found that 65% had one or more non-native species. In fact, virtually every public lake larger than 200 acres in the Adirondacks now has one or more non-native species present.

Studies have documented the effects that newly introduced top predators can have on aquatic ecosystems. Predators can force a change in the invertebrate communities of ponds, leading to the extirpation of amphibians. Feeding habits of non-native fish can affect water chemistry. Some non-natives also reproduce faster, which can increase fish numbers and raise nutrient levels. Chemical treatments to remove non-native fish can help to restore aquatic systems and allow communities to return to a more natural and balanced state.

Biologists must consider many factors before deciding to chemically treat a ponded water. For instance, a water to be reclaimed for brook trout restoration must have a documented history of brook trout presence and have the following required chemistry: at least some water that remains below 70 degrees Fahrenheit all summer; dissolved oxygen levels above 4 parts per million in the cold water zone; and pH above 5. In addition, physical features of the pond and surrounding area must be considered. The presence of wetlands, natural fish barriers, or a complex shoreline can make treating an area nearly impossible. In the Adirondacks, many water bodies have complex inlet waters with numerous wetlands that make the system untreatable. Large natural springs in ponds and lakes can also make for problematic treatments.

Reclamation is a fisheries management tool that is selectively used. Only 2% of waters in the Adirondack Park meet conditions necessary for a successful reclamation and reintroduction of native brook trout. Lower Sargent Pond is one of them.



DEC staff prepared the boats and equipment (top photo) for applying the rotenone to the pond's surface (bottom photo).

As for Lower Sargent Pond—only time will tell how our native trout will fare. But the signs are good, and there's every expectation that those anglers willing to make the trek there this year will be rewarded with some beautiful two-year-old brookies.

**Rob Fiorentino** is a fisheries biologist in DEC's Warrensburg office.  
**Eileen Stegemann** is assistant editor of *Conservationist*.



Jim Clayton

# STOPPING THE SPREAD

## A collaborative effort to combat invasive species

By Catherine McGlynn

Imagine your favorite lake on a peaceful summer morning: mist rises from the water as birds sing all around you. You launch your canoe in a beam of sunlight, and soon after leaving shore you become entangled in a dense mat of vegetation. Your tranquil, leisurely paddle has suddenly become hard work. You have just had a personal encounter with an aquatic invasive plant.

A previous canoeist, kayaker or boater may have accidentally transported a plant fragment from an infested waterbody to your lake. Once the fragment sprouted roots, the plant grew to the water surface creating a mat of vegetation that shaded out native vegetation. Replacement of native waterweed (*Elodea canadensis*) by invasive plants affected turtles, beaver and muskrat that ate the native plant, and young fish and amphibians that used it as cover. As the invasive plant spread, it outcompeted the native plant in other areas. In the future, even the lake's nutrient cycle could be affected. All of this could have been prevented if boaters inspected their trailers and removed aquatic invasive species before launching.

More than fifty such aquatic invasive species have been reported in New York State. By taking a few simple precautions before launching or leaving a location, boaters, canoers, kayakers and jet skiers can help stop their spread.

Catherine McGlynn



Public education is the first line of defense against aquatic invasives.

Eurasian watermilfoil is another invasive species detrimental to native plants.



Alison Fox

**Prevention** is the most effective method for dealing with many aquatic invasives. In simple terms, an aquatic plant or animal with limited mobility cannot invade a water body if it is never introduced there in the first place.

Aquatic invasive species have harmful effects on regional habitats and local economies. For example, the invasive plant hydrilla (*Hydrilla verticillata*), a recent invader in New York, will grow along the bottom of a river or lake in

late spring and then grow up through the water column to the water's surface in the summer. It creates a thick "wall" of vegetation that is very hard to penetrate, and can outcompete native plants used by fish and invertebrates (animals without spinal columns like crayfish and insects). Unfortunately, hydrilla easily breaks into fragments that can be carried by boats, boat trailers and fishing equipment. Each of these fragments can sprout roots and grow into new plants. Hydrilla has

Leslie Mehrhoff



The invasive plant *Hydrilla verticillata* creates a thick vegetative wall that outcompetes native plants.

Zebra Mussels can clog intake pipes by adhering to any surface.



Chris Bowser

already been found in Broome, Erie, Kings, Monroe, Nassau, Orange, Suffolk, Tompkins and Westchester Counties. Once established, its dense mats of vegetation prohibit recreational water use and can be very difficult, if not impossible, and expensive to eradicate. In addition to the expense of hydrilla management, towns and villages lose income from recreational use of their waters, and waterfront property values decrease.

Another aquatic invasive species that is difficult to eradicate is the zebra mussel (*Dreissena polymorpha*). Zebra mussels adhere to hard surfaces, like boats, trailers and buoys. In their early life stages, free-swimming microscopic larvae called veligers drift in the water column and can be unknowingly transported in water in bait buckets, live wells, bait wells and bilges. Adult zebra mussels attach to and smother native mussels and filter small animals and plants from water that are usually eaten by native mussels and other native animals. Zebra mussels also clog water inflow pipes that transport municipal water supplies and are expensive to control.

Hydrilla and zebra mussels are just two of many invasive species that are problematic in New York. Knowingly transporting these and other species is prohibited by law. DEC's website ([www.dec.ny.gov/animals/265.html](http://www.dec.ny.gov/animals/265.html)) provides information on numerous other nuisance and invasive species, including information about current regulations.

New York promotes responsible boating practices to reduce the like-



Boat stewards, like Elisa McIntosh (pictured here), help thwart the spread of invasive species.

likelihood of invasive species transport. The goal is for people to arrive at launch areas with their fishing equipment, kayaks, canoes, boats and jet skis already inspected and all water-holding compartments cleaned, drained and dry. Many boat steward programs are active throughout the state. Stewards perform voluntary watercraft inspections and provide boaters with information about aquatic invasive species and how to prevent their spread. Stewards serve as the “gatekeepers” to our precious water resources.

This past season, boat stewards worked at more than 75 locations in the Adirondacks, Finger Lakes, Catskills, Lower Hudson River and Long Island. At some locations, equipment washing stations are also available. Through this effort, boat stewards have intercepted several potentially invasive hitchhikers such as zebra mussels and Eurasian watermilfoil, and talked about preventive practices with thousands of people, both tourists and New York state residents.



A steward inspects a boat and trailer for plant fragments.



Kayakers and canoeists can spread invasive species unintentionally.

Practicing preventive measures for your boats, kayaks and canoes includes the following: remove visible aquatic plants and animals and sediment, and dispose of this material in the trash or above the water line; clean your equipment; drain all water-holding compartments; and when possible, dry your boat and equipment for five to seven days between uses. If drying is not an option, decontamination is an effective alternative. More details can be found at [www.dec.ny.gov/animals/48221.html](http://www.dec.ny.gov/animals/48221.html). DEC has posted invasive species prevention signs at public boat launches as reminders, and many public boat launches also have aquatic invasive species disposal stations.

New York has more than 70,000 miles of rivers and streams, and 7,600 lakes, ponds and reservoirs. Stewardship programs can help with preventative measures at some locations, but stewards cannot be stationed wherever a boat may be launched. It is up to our residents and visitors, conservationists all, to clean, drain and dry their boats and equipment to protect our rivers, streams, lakes and ponds for future generations to enjoy.

**Catherine McGlynn** works in DEC's Office of Invasive Species Management in Albany.



zebra mussels



Carl Heilman II

# On Patrol

*Real stories from Conservation Officers and Forest Rangers in the field*

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

DEC photo



## Bobcat Poacher—Putnam County

A concerned hunter/trapper contacted ECO Dustin Dainack after receiving a troubling photo on his cell phone. It showed a man holding a freshly killed bobcat with the message "40-pound bobcat my foreman shot this morning at 9." Bobcat season had already been closed for more than a month. Officer Dainack was able to read a facility's name on the man's uniform, which led him to a nearby cemetery. He realized the driver of a truck in the cemetery was the same man who had been holding the bobcat in the photograph. After a brief interview, the poacher admitted he had shot the bobcat earlier that morning and he surrendered the carcass.

## Dirty Car Wash—New York County

ECOs Jordan Doroski and J. Wesley Leubner were patrolling fishing spots on the Harlem River in northern Manhattan when they witnessed a discharge of liquids directly into the river. The liquids came from

DEC photo



a van owned by a mobile car wash operation that uses industrial strength chemicals clearly labeled "DANGER! POISON!" and "Do not dispose in waterways or sewers." As a result of the illegal dumping, the car wash operation was shut down, all evidence was seized, and the owner received a summons for various violations plus two misdemeanors for disposing noxious/poisonous substances in the river.

## Youth Turkey Hunt—Jefferson County

ECOs from Jefferson, Lewis and St. Lawrence Counties took youngsters out turkey hunting during the Sixth Annual North Country Youth Turkey Hunt. Activities included a day spent on safety and hunter education, and another day hunting. The Watertown Sportsman's Club hosted the event, which the New York Conservation Officers Association and the Northern New York Chapter of the National Wild Turkey Federation sponsored. Twelve youths participated. In addition to learning about the history of the wild turkey, turkey hunting strategies and calling techniques, and hunting and firearm safety, they took a marksmanship course at a shooting range before going afield.

## Injured Angler—Franklin County

On a night in early fall at nearly 9:00, DEC's Ray Brook Dispatch received a call from Franklin County 911 requesting Forest Rangers for a fisherman who had fallen off a rock ledge in the Town of Brighton. Ranger Tom Gliddi responded with the Saranac Lake Fire Department and Rescue Squad, Paul Smiths - Gabriels Fire Department, and NYS Police. They found the man about 0.2-mile from the road at the bottom of a 20-foot cliff. He had been walking along a ridgeline in DeBar Mountain Wild Forest when he slipped and fell. They carried the man to a waiting ambulance, which took him to the Adirondack Medical Center in Saranac Lake with reported back injuries.



### Ranger/ECO Exam

Are you interested in a career as a DEC Environmental Conservation Officer or Forest Ranger? The entrance exam is likely to be given this autumn. Click on "Job Seekers" on the NYS Civil Service website ([www.cs.ny.gov](http://www.cs.ny.gov)) to view upcoming exams, learn more about tests, sign up to receive email notifications of new exam announcements, and much more.



Visitors to Nature Play at Clark Reservation are greeted by its signature maple leaf sign that highlights the eight nature-themed stops along the Eco-trail.



Kids learn about bats and spiders as they clamber on the cave and Spider Climber.

# NATURE PLAY AT CLARK RESERVATION

## Bringing the park to the playground

By Tom Hughes

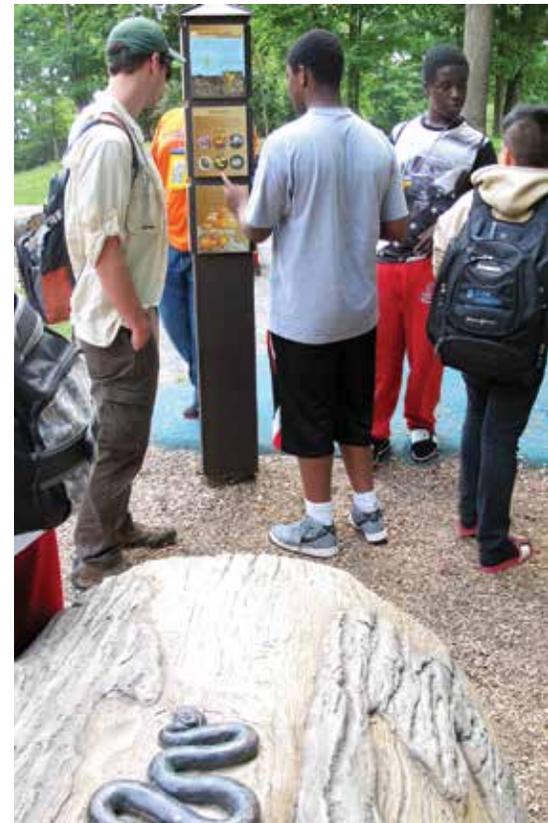
Photos provided by the author

As I approach the newly opened playground, validation comes in the form of peals of laughter and squeals of delight. It's just what I had hoped to hear. Our experiment in playground design is getting a virtual "thumbs-up" from some of the area's toughest critics: children. They are here to enjoy themselves, and our hope is that they learn something about their environment while they're at it.

Today, we are celebrating the moment when my colleague Don Peters, a landscape architect with NYS Office of Parks, Recreation and Historic Preservation's (OPRHP) Central Region, came into my office and enthusiastically exclaimed, "I want to create a nature playground at Clark Reservation State Park—are you in?" I accepted Don's invitation without hesitation! Don further explained that our agency had received funds from Governor Cuomo's New York Works program to design and construct new playgrounds throughout NYS Parks and Historic Sites.

Don and I work hard every day to provide safe and enjoyable recreational opportunities for the public, and to be responsible stewards of our environment at the same time. Our nature playground project provided both of us with the perfect platform to meet our goals.

With so much recent conversation and study to suggest that today's youth are experiencing what author Richard Louv terms nature deficit disorder, we set out to bring the natural world at Clark Reservation directly to the kids in the playground. As we sat at a picnic table amongst the towering and vibrant ash and maple trees, Don and I shared ideas for all the different natural ecosystems that exist in the park, each with their unique complex of flora and fauna, including the American hart's-tongue fern, Indiana bat and the globally rare meromictic (no seasonal mixing of surface and bottom waters) Glacier Lake. This exercise inspired the design of our playground's Eco-trail which has several nature-



Each educational kiosk has three tiers of interpretive information adjusted for the average height, age and education level of its intended audience.



The playground bustles with kids from one of the many summer camps that visit the park each year. The Otter Slide, with its attractive in-grade construction and stonework, is a popular feature.



themed areas, including customized play equipment, interpretive kiosks, and an exploration zone for free play.

Our goal was to create a recreational and educational playscape that represents a microcosm of the 365-acre park, highlighting its tremendous diversity of plants and animals. The result is that a park that typically takes more than an entire day to explore can now be enjoyed by park patrons who can only commit an hour or less. To accomplish this, we employed consultants from Parkitects

Inc. and Landscape Structures. We also engaged the design talents of landscape architecture students Katrina Rogus and Bradley Wells, and the artistic talents of environmental interpretation student Elisabeth Holmes. All three participate in OPRHP's collegiate FORCES\* program at SUNY College of Environmental Science and Forestry.

I am excited to report that park patron feedback for Nature Play at Clark Reservation has been overwhelmingly positive, and it is now a popular destination for

home-schoolers, K-12 students and educators, community groups and the public. Our agency is currently exploring ways to expand our model for Nature Play at Clark Reservation and spread Don's creative legacy to other park playgrounds around the state.

**Tom Hughes** is a natural resource steward biologist for NYS OPRHP Central & Finger Lakes Regions.



Clark Reservation State Park is located in Jamesville, Onondaga Co.



A beautiful bouquet of native wildflowers (foreground) adorns the entranceway to the Fossil Finder and Edible Garden.

\*Find more information about collegiate FORCES (Friends of Recreation, Conservation & Environmental Stewardship) at: [nysparks.com/environment/forces.aspx](http://nysparks.com/environment/forces.aspx)

DEC photo



## Lifeguards Needed

DEC is recruiting lifeguards for its Adirondack and Catskill campgrounds. Free lifeguard exams began January 9 and will continue through June 12 at various locations. Applicants must be at least 16 years old and must possess current certifications. The hourly rate for DEC lifeguards is \$13.27, and some facilities offer free housing. For more information, updates, or to register for the exam, call 518-457-2500, ext. #1; e-mail [Info.LifeGuard@dec.ny.gov](mailto:Info.LifeGuard@dec.ny.gov); or visit DEC's website at [www.dec.ny.gov](http://www.dec.ny.gov) and search "lifeguard."

## Northville-Placid Trail Reroute

More than 23 miles of new trail on the famed Northville-Placid Trail are open for public recreation in the Adirondacks. The now 135-mile Northville-Placid Trail traverses the heart of the Adirondacks from the Village of Northville in Fulton County to the Village of Lake Placid in Essex County. Along the way, it passes through or near the communities of Piseco, Indian Lake, Blue Mountain Lake and Long Lake. The Adirondack Mountain Club (ADK) completed the Northville-Lake Placid Trail 91 years



Pete Nye

ago after two years of construction and has worked with DEC to maintain and improve the trail. The most recent rerouting, completed by an ADK professional trail crew under contract with DEC, replaces 7.6 miles of walking along State Route 30 and Benson Road in the Towns of Northampton, Fulton County, and Benson, Hamilton County with an 8.6-mile trail through a tract of the Shaker Mountain Wild Forest.

## Bassmaster Tournaments

Governor Cuomo recently announced that the Bass Anglers Sportsman Society (B.A.S.S.) will partner with New York State to bring several fishing tournaments to upstate New York in 2016. These events will include the Governor's Challenge fishing competition and some of the biggest names in professional fishing to highlight the state's many fishing opportunities. For more information, visit [www.bassmaster.com](http://www.bassmaster.com) and click on tournaments.

DEC photo



Recently, Empire State Development's Division of Tourism, I LOVE NY, partnered with B.A.S.S. to bring Casting Kids to Central Park in New York City with the goal of introducing a new audience to fishing. As part of the program, various vendors partnered with B.A.S.S. in donating 400 rod and reel combos to NYC Parks to use in a rod-lending program. For more information, visit [www.iloveny.com](http://www.iloveny.com). Fishing license requirements and other regulations, along with fascinating details about the many species that call New York home are available at [www.dec.ny.gov](http://www.dec.ny.gov).

## iMapInvasives Training

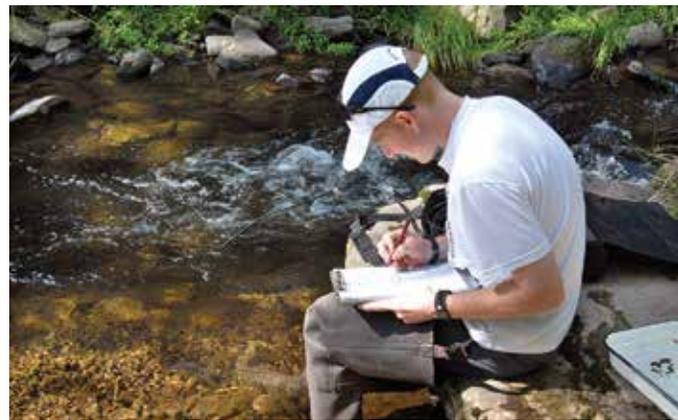
You can help stop the spread of invasive species! Become part of New York's invasive species early detection network by learning how to use iMapInvasives, an online mapping system shared by citizen scientists, educators and natural resource



professionals. All interested groups are encouraged to help keep the map current and accurate by reporting invasive species locations and control efforts. You can even use your smartphone to report new findings. The NY Natural Heritage Program is offering free training sessions throughout the state, with beginner and advanced levels. Visit [www.nyimapisinvasives.org](http://www.nyimapisinvasives.org) for schedule details and registration, and e-mail [imapinvasives@nynhp.org](mailto:imapinvasives@nynhp.org) with general questions.

## Water Monitors Wanted

DEC is recruiting volunteers to sample water quality in streams and rivers during the 2016 summer sampling season. Training sessions for Water Assessments by Volunteer Evaluators (WAVE) will be held in May and June. Citizen monitors visit stream sites once annually between July and September to collect macroinvertebrates—insects and other small organisms—from the rocks and rubble on the stream bottom. If six or more of the “Most Wanted” organisms are found, a stream segment is deemed fully supportive of aquatic life. If sampling primarily finds “Least Wanted” organisms, the stream segment is flagged for potential investigation by DEC professionals. For more information or to register for a training session, e-mail WAVE Coordinator Alene Onion: [wave@dec.ny.gov](mailto:wave@dec.ny.gov).



Susan Shafer

## Excelsior Conservation Corps

Governor Cuomo recently announced the inaugural class of Excelsior Conservation Corps, a new program for young environmental educators and stewards. Fifty members from diverse backgrounds will work on environmental projects while gaining hands-on experience that could lead to careers in environmental conservation. DEC projects include trail improvements at Arden Heights Woods in Staten Island, teaching people how to fish at I FISH NY clinics in Manhattan, Brooklyn, Queens and the Bronx, and developing a history trail at Five Rivers Environmental Education Center in Albany County. Members will receive extensive

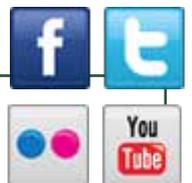
DEC photo



training and certifications in wilderness work and public safety at Morrisville State College. After completing their training, they will divide into small teams and tackle priority projects across the state. This 10-month service program

is administered by the Student Conservation Association (SCA). For more information or to apply, visit the SCA website at [www.thesca.org](http://www.thesca.org).

Dan Eldridge



## DEC's Media Corner:

DEC's Facebook post of a video of a flock of more than 50 turkeys walking around in the early morning in Prattsville was incredibly popular. Submitted by one of DEC's Facebook followers, the video was seen by more than 447,300 people, making it our second highest viewed Facebook post ever.

If you have an interesting story, photo, or video relating to DEC that could be shared on our Facebook or Twitter pages, please send them to [socialmedia@dec.ny.gov](mailto:socialmedia@dec.ny.gov).





### Squabbling Squirrels

I saw these two squirrels fighting under a bird feeder in my yard and was able to take a few pictures of the squabble. This was the best photo. It appeared the red squirrel was the aggressor; neither looked to be injured.

Brad Wanik  
Fort Ann

*It's likely these squirrels were competing for food. Red squirrels are specialists at eating seeds from pinecones, but they are opportunistic. If other food sources are available, they will take advantage of them, even if it means tangling with the larger gray squirrel.*

— Michael V. Schiavone, DEC Wildlife Biologist

### Naptime

I ran across this red fox taking a short break from his busy day. Enjoy!

Maureen Moore  
Cornwall



*How lucky you were to capture this beautiful image.*

### Uncommon Guest

From Dec 30<sup>th</sup> through Jan 5<sup>th</sup>, we enjoyed this visitor at our feeder. Not knowing what species it was, we sent the photos to a birder friend who identified it as a summer tanager. We knew it was different, but were surprised to discover it was a rare bird in our area.

Dick and Jeanne Dupre  
Constantia



*What a fantastic sighting! That is indeed a summer tanager, which is rare to find in upstate New York in the summer and extremely rare in the middle of winter. They are found in the mid-Atlantic and southern portions of the United States and spend winters in South America. (Note: The Dupres' discovery made Cornell's Rare Bird Sighting list.)*

### Too Full to Move

Our son, Evan, took this photo of a raccoon on our porch one evening. The raccoon had stuffed itself on sunflower seeds from our bird feeder and was resting after his feast.

Helen V. Nershi  
Jefferson

*Great photo. Raccoons feed mainly at night and eat fruit, nuts, small animals and insects. They also will feed on pet food, birdseed, garbage and garden crops. Raccoons can become a nuisance if people unknowingly supply them with a steady source of food. Because they can transmit serious diseases to humans, it's best to enjoy them at a distance.*



## Bear Marks

Retired DEC employee James Close sent us these photos of bear claw marks on the trunk of a beech tree he passed while hiking the Northville-Placid Trail near West Stony Creek.



## Never too Young

It has become tradition for me to give a *Conservationist* subscription to all the newborn members of my extended family. I thought you'd appreciate this picture of my grandson Adam attentively looking at his first issue (December 2015) of *Conservationist* with his dad Ryan Akin.

Janet Akin  
Seneca Castle



*Thanks so much for the sweet photo. We love to see someone so young enjoying the magazine.*

*New York State Conservationist, April 2016*

## Ask the Biologist

**Q:** We found this dead fish washed up on the shore on Keuka Lake. It had another smaller fish lodged in its mouth. Can a fish choke while eating another fish?

—The Dack family, Mendon



**A:** Although rare, it's definitely possible for a fish to “choke” while consuming another fish. Fish breathe by taking water in through their mouths and pushing it out through their gills, which remove oxygen from the water. If a large item becomes stuck in a fish's mouth, it can prevent the fish from taking in water, thus stopping it from getting oxygen and ultimately causing it to suffocate.

—Joelle Ernst, DEC Fisheries Biologist

### Contact us!

E-mail us at: [magazine@dec.ny.gov](mailto:magazine@dec.ny.gov)

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

[facebook.com/NYSDECtheconservationist](https://www.facebook.com/NYSDECtheconservationist)



# Back Trails

Perspectives on People and Nature

John Bulmer

## Down Time

by Rich Redman

I pulled off at the parking area and asked the guy in waders if he caught anything. He said, “Just a few little ones. Maybe it will be better tonight with a hatch. There are big ones in the back waters.”

With two hours of daylight left, I was going fishing no matter what. I looked for a spot that fit my mood. I didn’t want the noise of fast water; I just needed some peace and quiet. I figured I needed a vacation for a few hours; I’d been cutting wood, putting up fence and cleaning out the barn, so I’d earned a break.

I drove down the road and found a nice pull off. I walked down a path to the West Branch of the Ausable River and noticed a few fish rising. “Cool,” I thought to myself, “I don’t care if they are small; I just want to catch some fish and chill out.”

I slipped on my waders, grabbed my 6-weight rod, and headed upstream to cross. I could see some of the fish: their snouts coming out of the water to slurp some flies, while others were jumping right out after something. Now my mission was to find what they were after. In fly fishing lingo, it was “match the hatch” time.

I knew there would be some mayflies coming off, and caddis hatches later in the evening. Blue-winged olives were my fly of choice at the moment, but tying on a size-20 and catching fish is not easy with my seasoned eyes. I have two pairs of glasses in my fishing vest and sometimes I have both on my face at once. (Yeah,

I look like a fish nerd, but the 2x power readers let me tie on a fly, and the fishing glasses cut the glare on the water.) Threading the needle on a stream without them is just a stab in the dark, so to say.

The fish were rising for a mystery meal, so I tied on something I could see: a size-16 Adams. After about 10 casts, I caught a nice, 10-inch brown trout. I tried a different dry fly—one with a ginger body and grizzly hackle—and tied it on a size 16 hook.

I let this one glide downstream and watched the fly drift right between two feeding fish. All of a sudden, wham: a fish took the fly. By the tug and run of it, and the fight he was giving, I knew this was no 10-incher. The fish swam upstream, then down and across like a receiver working a football play. The give-and-take game went on until the fish was tired, but not exhausted. I didn’t have a net, so I had to grab it with a wet hand: slippery but not impossible.

I brought him in slowly and was able to get my hands around him. I juggled a camera in one hand with the rod under my arm, and snapped a quick picture. I removed the hook without any harm and released the fish. It took a second, but the trout swam away, shaken but not stirred too much.

As I cast once again, I noticed some ripples along the shore and thought it must have been a big one, cruising. Suddenly, a beaver popped out. He looked at me, crossed the stream, and



nipped off a shoreline branch of a willow. He carried it away in the darkness. I landed two more fish that evening and stayed until it was too dark to see.

As I started back to my car, I saw another guy just getting to his own. I asked how he did fishing; he said he missed a big one. I said it was a beautiful day to be alive. He nodded and said, “Every day is!”

I agreed. I had a great day—and some much-needed down time!

**Rich Redman** is an avid fly fisherman from Essex County.



Trees and shrubs prevent soil erosion and keep rivers cool for fish.

## Trees for Trout

Many kinds of animals benefit from trees—even trout! Trees shade streams and keep water cool, which NY's native trout require. Streambank trees keep water clean, prevent silt from covering important fish habitat, and provide flood protection by retaining soil during storms. Streamside trees also help provide food, shelter and safe travel corridors for wildlife.

NYS DEC's Saratoga Tree Nursery operates Trees for Tributaries, a volunteer effort to replant native trees along New York's riparian areas (areas along streams). Our state's native fish, wildlife and water quality all benefit.

To learn more about this program visit the Trees for Tributaries website: [www.dec.ny.gov/animals/77710.html](http://www.dec.ny.gov/animals/77710.html)

## Celebrate Arbor Day!

April 29, 2016

This Arbor Day, celebrate trees—plant a tree or seedling. Whether next to a stream, in a park, or in your own backyard, planting a tree will provide benefits to you and your local community!

To learn how to get seedlings, visit [www.dec.ny.gov/animals/7127.html](http://www.dec.ny.gov/animals/7127.html)



Also, be sure to check out our Facebook page at [www.facebook.com/NYSDECsaratogatreenursery](http://www.facebook.com/NYSDECsaratogatreenursery).



See page 26

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