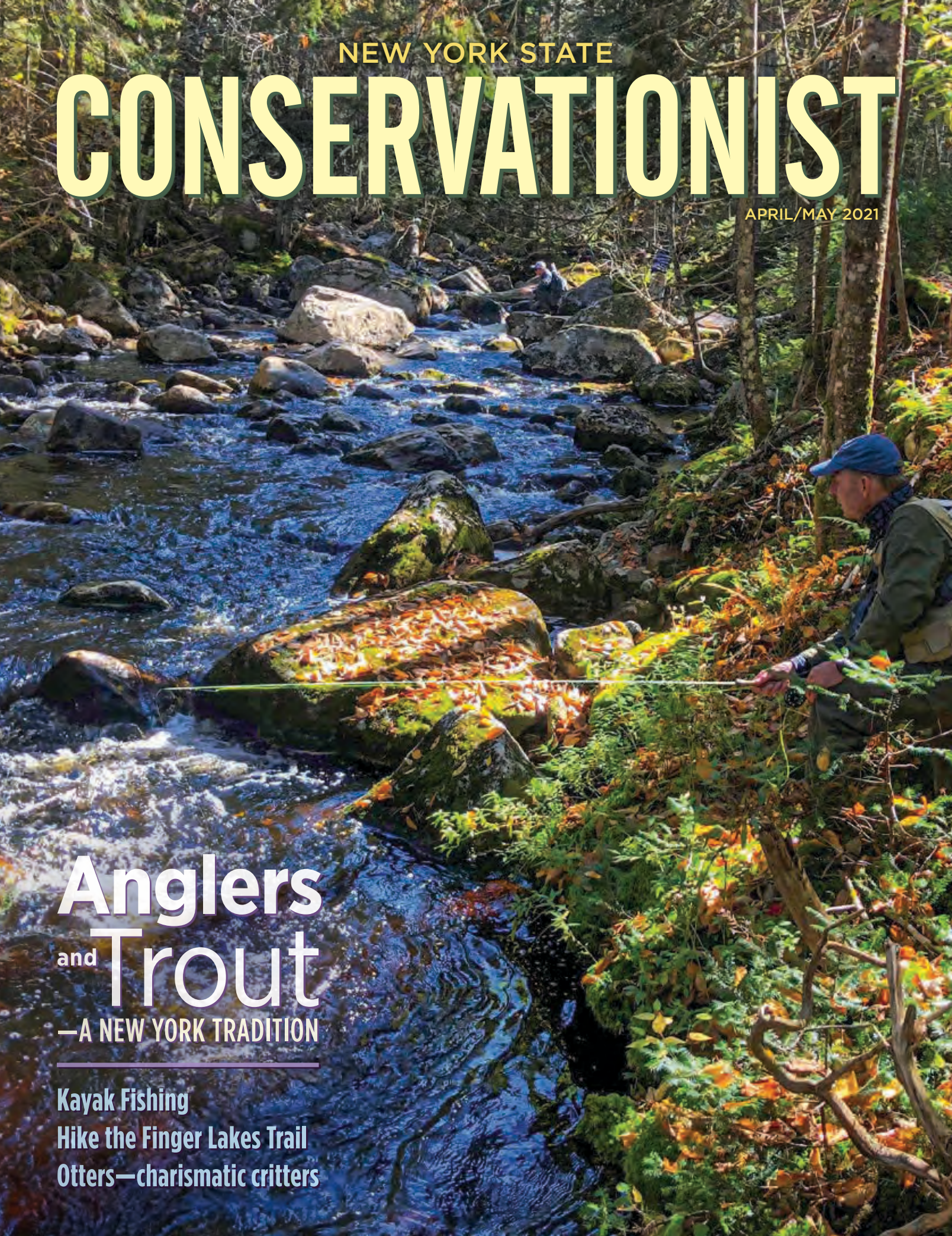
NEW YORK STATE

CONSERVATIONIST

APRIL/MAY 2021



Anglers and Trout —A NEW YORK TRADITION

Kayak Fishing

Hike the Finger Lakes Trail

Otters—charismatic critters

Dear Readers,

Spring is always a welcome sight in the Northeast. Coupled with the arrival of vaccinations to protect our families from COVID-19 and warmer weather, thousands of New Yorkers are venturing out into nature in the days and weeks ahead.

Spring is also a time of rebirth both in nature and the human spirit as we emerge from winter and begin to reconnect with nature and one another.

This edition of *Conservationist* dives deep into the wonderful world of trout, taking readers on an underwater journey into their natural habitat and a behind-the-scenes look at the DEC biologists and wildlife professionals managing trout populations and enhancing their habitats. You'll find several articles about fishing, including efforts to preserve heritage brook trout, which have a long history in New York. Don't miss the story about pumpkinseed, a sunfish found across the state that is a popular fishing target and a tasty treat.

Readers can also learn about the excitement of kayak fishing, a great way to explore waters throughout New York. You might be surprised at how modern-day kayaks differ from those of the past, and how they can provide a unique and enjoyable experience for anglers and boaters alike.

Back on land, hiking enthusiasts can read about the Finger Lakes Trail, a long-distance path that offers hikes of various durations and levels of difficulty, and connects people of all ages and abilities to State Forests, State Parks, and other great attractions. The article also highlights how volunteers maintain the trail, including constructing lean-tos for hikers.

Finally, you won't want to miss an article about river otters to learn how DEC and its partners have helped these personality-packed animals make a remarkable comeback in central and western New York.

All this and much more as we welcome spring with the latest edition of *Conservationist*.

Best regards,
Basil Seggos, Commissioner

P.S. I want to extend my gratitude to *Conservationist* editor Eileen Stegemann upon her retirement after a 39-year career with DEC. Eileen started at DEC in 1982 as a fisheries technician in Watertown, before moving to DEC's Albany office in the mid-1980s. She has worked for *Conservationist* since 2003, and became its first woman editor in 2018. On behalf of the entire DEC family, I thank Eileen for her exemplary service in support of our environment and wish her all the best as she begins the next chapter of her life. Thank you, Eileen, for a job well done.

NEW YORK STATE Department of Environmental Conservation

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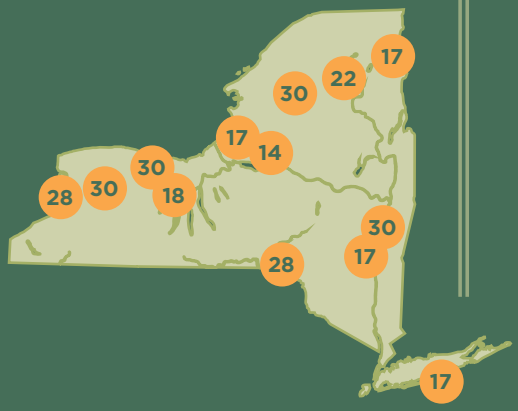
See page 18

Maintaining and improving the Finger Lakes Trail

CONTENTS

APRIL/MAY 2021 | VOLUME 75, NUMBER 5

DEPARTMENTS



SPECIAL INSERT

CONSERVATIONIST for kids!

FRONT COVER: Stream trout fishing, by Chris Murphy; **BACK COVER:** River otter, by Amy Comerford

Blue Halos

—IN PRAISE OF WILD BROOK TROUT

BY CHRIS MURPHY with MARK USYK

Nothing makes me happier than fishing for wild brook trout. These fish have a long history in New York State, and there is a dedicated group of people who chase these gorgeous jewels of nature.

Brook trout (*Salvelinus fontinalis*) are native to the eastern United States and Canada. They are a coldwater species, meaning they prefer coldwater habitats, such as brooks, streams, creeks, rivers, and deep lakes and ponds; they thrive in water temperatures ranging from the 50s into the mid-60s.

Brook trout are colorful fish with characteristic red spots surrounded by blue halos on their sides.

Brook trout have a number of common nicknames, including brookies, specks, speckled trout, squaretails, and brook char. The latter nickname comes from the fact that the brook trout is not a true trout, but rather a char. Trout have lighter colored bodies with darker colored spots, while char have darker colored bodies with lighter spots.

The brook trout is one of two char that are native to New York State; the other is the lake trout. There is actually no true trout native to New York. Rainbow trout were introduced from the West Coast of the United States, and brown trout were brought over from Europe. Even with trout and char being stocked throughout the state, there are still places where you can find wild fish whose genetics have not mixed with stocked fish. These places are often far off the beaten path, but the reward is well worth the effort to get to these remote and wild places.

The brook trout's colorful appearance is what first made me fall in love with them. Brookies could have been painted by the finest of Renaissance minds, mixing a rainbow of green, scarlet, blue, yellow, white, and black. Brook trout have characteristic markings on their back called vermiculations, which appear as a marbled swirl of dark green and yellow.

The sides of brookies are a lighter green color that can vary to near cobalt blue or violet, and are covered with yellow spots and the quintessential red spots surrounded by blue halos. Their belly is either white or orange, and their fins are red or orange, with white tips separated by a black line. The tail is square, with rounded corners, and is usually orange and green, with black spots and patterns.

Many fly anglers cherish the sight of watching a brook trout rise and leap out of the water, attempting to take a dry fly. If I ever win the lottery, the first thing I'll do in celebration is take my 6-foot, 6-inch, 2/3 wt. fly rod, with a Goddard Caddis, to an Adirondack brook trout stream. Ironically, when I am fly fishing for brook trout in a small headwater stream, I feel like I already won the lottery.

No one puts this wonderful feeling about trout streams into words like my friend and author, Mark Usyk.

THE SECRETS OF THE STREAM

BY MARK USYK

It starts as several little branches, flowing, wandering through the Adirondacks like lost souls without a care. Some begin as the outflows of small ponds in no-named forests, some gather the trickles of streams that only flow in the spring as snow melts and gradually become larger streams, and yet others just appear from out of the ground itself.

These branches flow through a pathless, dense forest, and as they gather their miles, they also gather width and depth, but still remain what you'd call a stream. They all finally join together, just before entering a notable lake. And through this lake, these waters pass, until it becomes the outlet of this first lake, which at the same point becomes the growing inlet of a second, larger lake, downstream.

All things in nature are linked, and watersheds are the basis. They're linked as everything else is, and they depend on their surroundings to gather water and grow, just as their surroundings depend on the water systems themselves.

There are brook trout here, wild fish that call these waters home. These native fish have a lineage going back to the end of the last ice age. Their will to survive, genetically ingrained in them, is why they've survived various threats to their existence, including deforestation, overfishing, and acid rain. And now as the climate continues to warm their home waters, these fish face another challenge—how to survive in an increasingly inhospitable environment. For when water temperatures are above 68°F, these beautiful fish can suffer from heat stress, which is potentially fatal to them.

I can only hope that they, once again, find a way to carry on. The cold headwaters, I need to believe, will be the key. It's because of these trout that I've spent so many days over the past few seasons hopping from rock to rock, crouching on the banks in the cover of green ferns, and exploring around each new bend, pushing farther upstream or downstream, making it my goal to finally be able to say that I've fished the entire thing.

That of course doesn't mean I know the stream with any intimacy, though there are a couple of runs I can say I know very well. But I could never claim to know where all the deep holes are, or where the largest fish live. The fishing can be so good that I've enjoyed success year after year. In fact, I've only ever been skunked on it once, and I blame that on the storm the day before, which raised the water level to raging whitewater on several runs.

In this stream, I've learned that if it looks fishy, you cast to it. There's probably going to be a flash of coppery pink, the tea color tinted waters playing on the pink belly of a brook trout. If it doesn't look fishy, well, even then I've seen many times the dart of a black fish shape and the same flash, as a fish takes and turns.

This stream is just a tiny pinpoint on the map of the Adirondack Park, yet to fish it—and be totally honest with myself—I know I'll never discover all of its secrets. That doesn't mean I won't try, but truthfully, I'm not sure I want to. Some things are better with an aura of mystery, so I travel to this watershed not trying to pry answers from it, but rather waiting to see what information it willingly gives up.

This is not my stream; I think it's completely the opposite. The stream doesn't belong to me, I belong to the stream. And so, I'll do what I can to protect it, while sharing its space. I'll carry out what I carry in; I'll catch and release; I'll tread lightly and leave no trace. This is the least I can do for such a great friend that I've only just met. It's already done more for me than I could ever repay.

Chris Murphy is a high school science teacher and president of Trout Power, a non-profit organization that seeks to identify and monitor wild and genetically unique brook trout in the Adirondacks.

Mark Usyk is the marginal fly fisherman and author of *Reflections of a Fly Rod* and *Carp are Jerks*.

Trout for the Future

DEC's New Trout Management Plan

BY CHUCK GODFREY

If you like to fish, what would you say if someone asked you what could be done to create a better fishing experience? If you're like me, you'd say "I'm glad you asked."

As anglers venture out to their favorite trout streams this spring, they will be taking part in a new trout fishing world—one that anglers helped create. This year will be the first season under new management practices outlined in DEC's Inland Trout Stream Management Plan. Many of these practices were developed from ideas suggested by anglers.

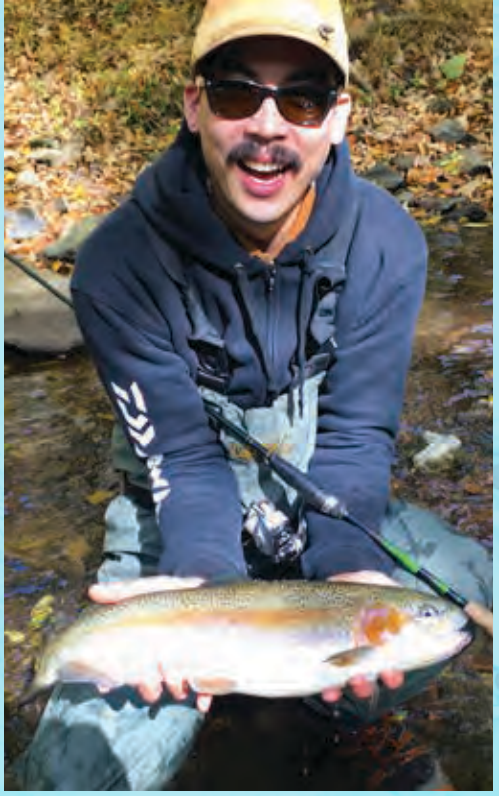
To me, the previous trout stream management objectives—in place since the late-1980s—always seemed to be centered around stocked trout and the catch rate goal. But several years ago, DEC recognized the need to revise and update the goals, objectives, and strategies, and that included gathering input from the anglers themselves.

DEC held public meetings across the state and asked anglers what they desired in the way of trout fishing. Anglers happily shared their ideas, and after compiling all the feedback, DEC created a focus group of fishermen and women from across the state to advise them on whether the proposed actions would deliver on what had been identified as the most important desires of the public. DEC fisheries staff then tweaked the Plan and submitted the final version, which was received with overwhelming support.

One of the key components of the new Plan is that DEC recognizes that not all streams are the same throughout their full length. As such, these streams are now divided into "reaches," and DEC categorizes the management of each "reach" according to its characteristics, taking into account their physical and water quality characteristics, the extent of its wild trout population, and the amount of angler use. Additionally, and equally important, the categories define expectations for anglers so they can pick and choose the trout stream fishing experience they desire. Specific categories within the Plan are:

1) Wild
2) Wild-Quality
3) Wild-Premier
4) Stocked
5) Stocked-Extended

Note: To find out more detailed information for each of the categories, go to DEC's website to view the Plan and the new regulations. There is also a Categorization of New York State Trout Stream reaches document, which anglers can use to find the angler experience they desire, in the location they choose.



A rainbow trout to remember

Brook trout—New York's state fish

A new generation of anglers

The new Plan strives to meet the wishes of a diverse angling public, and also places an emphasis on managing wild trout populations, which has been absent from "official" policy in the past.

Here are a few highlights.

Regulations

One of the goals of the new Trout Management Plan is to simplify the regulations. By separating management strategies into the five categories above, DEC has eliminated the need to develop special regulations for many varying streams, thereby making it easier for anglers to understand and follow. There will still be a regulations guide printed that will list, by region, all the stream reaches that fall into the Wild-Quality, Wild-Premier, and Stocked-Extended categories. All other stream reaches, including Stocked, Wild, or "uncategorized" will be managed under a new statewide regulation for trout streams, which is 5 fish per day, but now no more than two of those fish can be 12 inches or longer.

"DEC has eliminated the need to develop special regulations for many varying streams, thereby making it easier for anglers to understand and follow."

There are some changes made to the regulations related to the three "wild" trout categories. Most notable is the reduction in the number of fish that can be creeled in the Wild-Quality and Wild-Premier categories. Even though studies show that more than 80 percent of all trout caught are released, the reduced creel limit reflects the value of these fish. DEC has been managing wild trout in Western New York waters extensively for 30 years and now welcomes it as a more formal statewide policy.

As for stocked trout, DEC recognizes that the stocking program is an integral part of the trout fishing experience in New York. Through this program, anglers can pursue trout in waters that would otherwise not support enough wild trout to provide quality fishing. The stocking program provides great value from both a recreational perspective and in introducing trout stream fishing to anglers who might otherwise not take advantage of the opportunity.

Fishing for stocked trout is also a great way to introduce children to trout fishing. My first experience trout fishing was as a 5-year-old on Little Buffalo Creek in Erie County, and it helped spur my love for the outdoors and a lifetime of volunteer conservation work.

In my opinion, one of the Plan's highlights is that in the Stocked-Extended "reaches" there will be four stockings of trout, each two weeks apart. For years, many people have complained that the stocked trout are "all caught out" after the first two weeks of the season. The "extension" will enhance the opportunity to catch stocked trout during the season, on these select stream reaches, beyond the relatively short period of time allowed under previous stocking procedures. The Stocked-Extended category regulation of three trout with only one allowed over 12 inches also extends the length of time trout are available to be caught. These changes in stocking and regulations addresses one of the wishes identified during the public meetings during the Plan's development.

Another outcome of the Plan is stocking larger fish. To help make this a reality, DEC hatcheries are currently raising yearling trout to be at least 9 inches long before being stocked. Additionally, 10 percent of the fish in each stocking will consist of fish 12 inches in length or longer.

10% of each stocking will comprise trout 12 inches or longer.

A happy angler

Stocked-Extended reaches can handle higher fishing pressure due to their larger size and extensive public access.

The Catch-and-Release Season expands fishing opportunities outside of the regular harvest season.

New Tools and Opportunities for Anglers

To help anglers have better fishing experiences, DEC is developing an interactive map that will show every reach of every stream with public access, its management category, and where public access is located. People will be able to use the interactive map to see what the "reach" they are going to fish is categorized as, and then look up the regulations for that category. It should be noted that the interactive map covers only those "reaches" with official public access.

For me, perhaps the biggest change in the Plan is the introduction of "year-round" trout fishing in streams. This will be implemented through the creation of an "artificials only, catch-and-release" season from October 16 through March 31, in nearly every stream covered under the Plan. For those of us lucky enough to live in Western New York, this will not be as great a change as it will be for anglers in the rest of the state, as we've been able to do this on many of our local wild trout streams for much of the last 15 years or more.

"For me, perhaps the biggest change in the Plan is the introduction of 'year-round' trout fishing in streams. This will be implemented through the creation of an 'artificials only, catch-and-release' season."

These Western New York streams have all been extensively studied through electrofishing surveys and angler diary programs, to check for any issues. There have been no documented problems related to the October through March extension of the season; however, DEC plans to study this issue over the next three years to ensure there are no concerns.

Of course, people will need to be encouraged not to fish for spawning trout on redds (i.e., fish nests), but this has proven not to be a problem in my neck of the woods. I've spent many a day taking advantage of this provision over the last few years, fishing a couple of our most popular wild trout streams. We have some really nice weather in October and early November and catching trout in the Fall is a memorable experience.

Ed Opatczuk

Healthy stream habitat is essential for success.

Reach management category assignments will be reevaluated as biological surveys and fishing pressure estimates are conducted.

Protecting Trout Habitat

Habitat improvement and restoration are key themes in the new trout plan—something that is both welcome and necessary.

Here in Western New York, the area's three Trout Unlimited chapters have worked together with DEC fisheries since 1970 to improve and restore trout habitat. I estimate we've been able to take part in more than 70 habitat improvement and restoration projects during that time, including installing "cribbing," log revetments, deflectors, and more. One of the most important things we have done is to restore riparian zones along trout streams by planting tens of thousands of trees and shrubs.

Given the impacts of climate change, establishing shade trees along with bank stabilizing plants, like willows, is some of the most important habitat work we can do. There is a real commitment on the part of DEC to make this an ongoing effort, and active organizations like the State Council of Trout Unlimited are always working on projects like this with many other governmental and non-governmental partners, such as county Soil and Water Conservation Districts, U.S. Fish and Wildlife Service, as well as many private companies.

While these habitat improvement and restoration measures provide places for trout to live in, they can also aid landowners who are losing valuable land due to erosion and protect structures which municipalities are responsible for maintaining, saving taxpayer dollars.

"While these habitat improve-ment and restoration measures provide places for trout to live in, they can also aid landowners who are losing valuable land due to erosion and protect structures which municipalities are responsible for maintaining, saving taxpayer dollars."

Hopefully, everyone will be able to take advantage of this new approach to managing stream fishing for trout. I know that on any nice, pleasant day in early spring, I'll be tearing myself away from the Lake Erie tributaries to fish my favorite streams in New York State—the wild brook trout streams of Allegany State Park. I've been fishing now for 71 of my 73 years and it doesn't get any better than hiking for 30 minutes (it used to take 15) to get back to my favorite stream and try to catch some wild brook trout.

Chuck Godfrey is a retired math teacher (Williamsville South), present Girls' head track coach (Maryvale H.S.), past president of the WNY Chapter of Trout Unlimited and the Erie County Federation of Sportsmen's Clubs, the Region 9 Vice President of the NYS Council of Trout Unlimited, and a lifelong conservationist.

Streams of Dreams

The importance of trout habitat improvement

BY MARK KUGLER

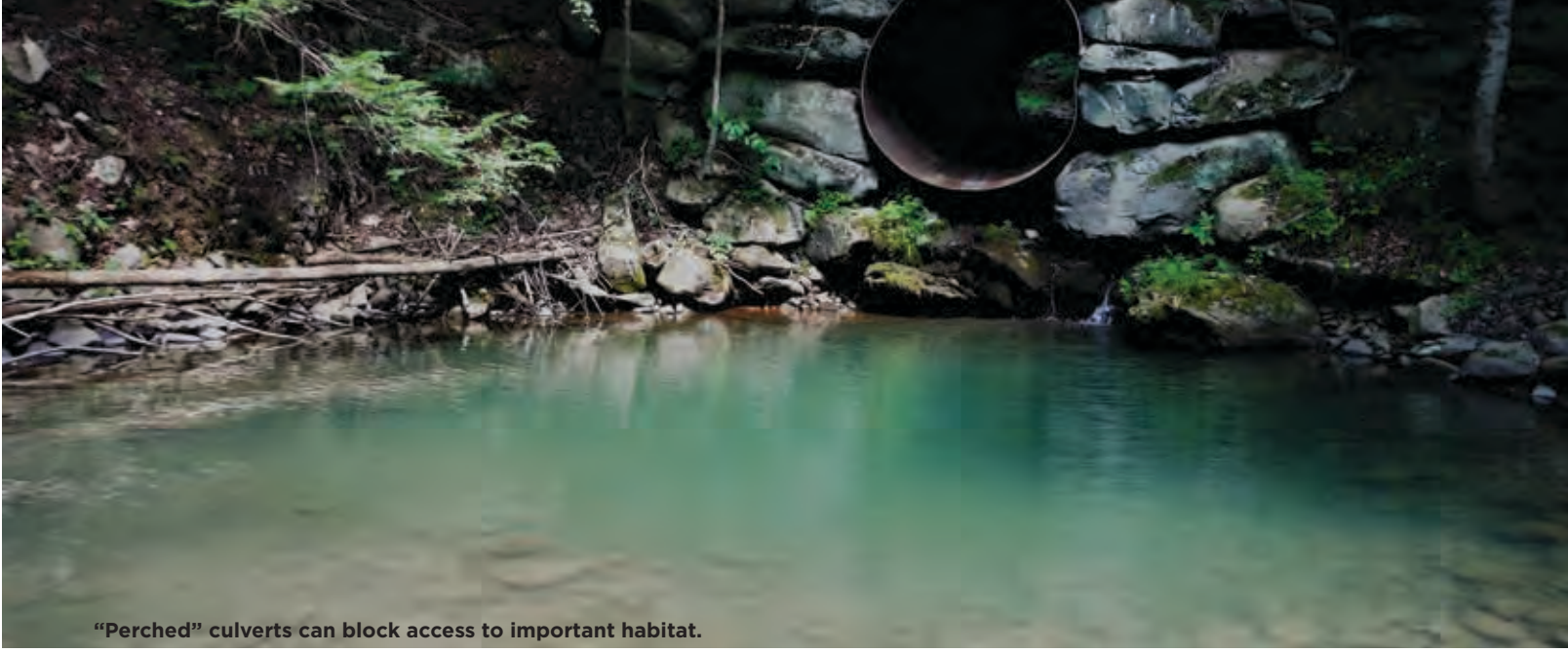
From the Atlantic Ocean to the Great Lakes, and all areas in between, New York State and its residents are blessed with a diverse bounty of water resources, which provide for a vast array of aquatic habitats and angling opportunities.

My fascination with fish began at an early age, and my pursuit of fish-related objectives went through what seems to be a natural progression. My passion began in the back corner of a field on my family's property that had a pond, and it eventually led me to the tip of Rock City Falls in Saratoga County's Kayaderosseras Creek, and every direction I've ventured since. For me, there has never been a greater potential reward for my effort than I get from catch-and-release fly fishing for trout.

Trout represent what is pure about the natural resources of our beautiful state. They rely on cold, clean water to survive, and many of the locations they inhabit are incredibly serene. Brook trout are a particularly sensitive species, with a fragile beauty that some might compare to a priceless painting. If you've ever seen a wild Adirondack brook trout, you'd probably agree.

A hard truth that we must accept is that humans are widely responsible for population declines of many native fish species. Historic and current activities, such as development, overharvesting of timber and other natural resources, and the construction of manmade impassible barriers (e.g. dams) have all contributed to far-reaching displacement and long-lasting population declines. To think that brook trout were once a dominant species in the Mohawk River seems far-fetched, but archaeological evidence tells us otherwise.

As a person who deeply values our natural world, I feel that there should be a responsibility, if not a restitution, for the error of our ways. There are definitely things we can do to help. Having played baseball throughout my younger years, and now working as a Stream Technician in Cooperstown, I recall the commonly confused movie quote, "If you build it, they will come," and I can't help but feel that it applies to fish. If we can work to improve in-stream habitat and restore riparian corridors to the forested areas they once were, we might be very pleased with the result—the return of more fish, to more places.



"Perched" culverts can block access to important habitat.

Trout Unlimited has partnered throughout the years with government and local stakeholders to restore in-stream habitat in a number of Catskill streams. They are now expanding their efforts to Washington County's Battenkill, and their work is an example of what great partnerships can accomplish.

We have come a long way from the days of placing temporary structures in streams that would merely hold fish within reaches (sections) of streams, and we have learned valuable lessons about how to work with nature, rather than against it. Utilizing modern scientific techniques, Watershed and Fisheries Managers are now learning that natural stream channel design and engineering allows us to repair sections of streams to withstand what are becoming more frequent and more extreme episodic weather events. We have learned that by using various aggregates (e.g., sand, gravel, crushed stone) and large woody debris, we can tailor these repairs to the specific hydrology and geology of each stream, allowing them to further heal on their own.

In recent years, numerous public meetings with trout stream stakeholders throughout New York State have produced a resounding sentiment for the conservation and preservation of wild fish, and DEC heard that message loud and clear. After years of careful thought and planning, we are now in a new age of Trout Stream Management, where we will not only be provided with traditional and newly expanded opportunities for angling, but there will be an added priority on habitat management for conserving our highly valued wild fish. This endeavor will undoubtedly require dedication and patience, as well as a holistic approach to watershed management, where a connection between land and water is understood. This can be our most cost-effective and prudent option for producing long-lasting impacts to promote sustainable fish populations.

"If you build it, they will come"

DEC's Trees for Tributaries program works with organizations, such as the Upper Susquehanna Coalition, and local Soil and Water Conservation Districts, to plant native trees and shrubs along streams throughout New York. This low-cost conservation practice can help aid in nutrient and sediment reductions, while providing shade during summer months and leaf litter in the fall, which fuels productivity for the coming year. These actions will have long-term benefits that will help and support trout as well as other aquatic organisms that rely on cold, clean water to survive.

Riparian buffers provide forage and habitat for a wide range of terrestrial organisms, and they enhance the aesthetic qualities of our landscapes. Planting riparian buffers can be a great way to volunteer and enjoy the outdoors, while working to benefit your community and future generations. At the very least, we can improve our environment, sequester carbon, and prepare vulnerable ecosystems for climate resilience and other challenges that lie ahead.

I applaud the efforts that are being made, and I'm excited about the direction we are heading. So, let's work to build it, and see if they will become streams of dreams.

An avid trout angler, **Mark Kugler** is a Stream Technician for the Otsego County Soil and Water Conservation District in Cooperstown. He is primarily involved in riparian restoration within New York's portion of the Chesapeake Bay Watershed.

NEW YORK'S RIVER OTTERS

A Conservation Success Story

BY MANDY BAILEY

Sometimes, the work of a wildlife biologist is much like that of a detective. Most of our careers are spent studying wildlife that are rarely seen. And so we are left hunting for the smallest clues, pieces of a puzzle that tell a greater story: a footprint in the snow or a tuft of hair caught on a branch—clues that tell us which wildlife are around and what they're up to.

A cold day in February 2018 was one of those days. Biologists from New York State's Department of Environmental Conservation (DEC) were on the hunt in western New York, searching the snow along a beaver pond for a weaselly character. In fact, they were looking for the largest member of the weasel family found in New York: the North American river otter (*Lontra canadensis*).

The year 2018 marked the second winter of river otter surveys conducted by DEC staff. All across central, western, and southeastern New York, wildlife biologists and technicians were scouring wetland and riparian habitats for the charismatic critters.

"We've got some jelly over here," one of the technicians shouted. Others gathered to take some pictures. While the substance is jelly-like in consistency, it's not anything you would want to put on your sandwich. It's actually a stinky secretion left behind by river otter, consisting of intestinal lining, bits of undigested food, and anal secretions. It may sound gross, but the anal jelly plays an important role for the otter. Biologists believe that the matter protects the lining of the river otter's intestines from the sharp bones and body parts of fish, crayfish, mollusks, and other food items they consume. Since the jelly contains pieces of undigested food, it can help biologists figure out what an otter is eating.

Someone else pointed out a few pieces of scat littering the area, shiny with scales from the fish that make up the bulk of the river otters' diets in this area. The snow here was trampled, but it was possible to make out a few individual tracks, identifiable by the webbing visible between the five toes. After much searching, the field crew stumbled across a latrine, a kind of communal bathroom used by river otter. It was the jackpot.

Surveys like this one have been a critical part of DEC's understanding of river otter distribution in New York. The species is quite active during the winter, and the snow shows signs of otter even when the otters themselves aren't visible. Biologists spend hours searching for scat and tracks along lakeshores,

beaver ponds, wetlands, and swamps, photographing otter signs, and marking datasheets. At the end of the winter, they compile the results of the surveys and send them to researchers at the State University of New York College of Environmental Science and Forestry (SUNY-ESF). These researchers use these results to develop "occupancy models"—a kind of statistical analysis that uses field surveys and habitat characteristics to estimate how likely it is that an otter inhabits an area.

The survey results are enlightening and help guide DEC's management of river otter. Historically, the eastern portion of the state has supported robust river otter populations. DEC's surveys confirmed that this is still the case, with river otter being found nearly everywhere there was suitable habitat in these areas. River otter are most common in northern New York, where untouched wetlands and remote ponds provide ample, ideal habitat for this semi-aquatic critter. However, it is the central and western half of the state that DEC is most interested in. In fact, before 2000, river otter had not been sighted there in more than 100 years.

Before European settlement, river otter were widespread throughout New York, as evidenced by the many waterbodies throughout the state that were named for the charismatic critter—there is an Otter Lake in both Cayuga and Oneida counties, Otter Creek flows through Lewis County, and there are three different Otter Ponds in St. Lawrence County alone. However, the destruction of wetland and riparian habitats, deforestation for agriculture and development, pollution of New York's waterways, and unregulated fur trapping throughout the nineteenth century led to a sharp decline in New York's otter population. By 1900, river otter had disappeared from most of central and western New York and were reduced to isolated pockets in the Adirondack and Catskill mountains. Things improved for the river otter in the second half of the twentieth century. As otter populations recovered in the eastern half of the state, the Conservation Department (DEC's predecessor) began to regulate river otter trapping, using science to set specific seasons and ensure that any harvest was sustainable. The environmental movement of the 1960s and '70s brought major improvements in water quality. Land once cleared for agriculture began to transition back into forest. The river otter population in the eastern half of New York flourished. Despite all of this, otter remained scarce in other areas of the state. Without more intensive intervention, DEC biologists estimated that it may take the greater part of a century for river otter to naturally recolonize all the areas where they once lived.

While fish are a favorite food, river otter will hunt for a variety of prey, including frogs, crayfish, salamanders, crabs, turtles, insects, and some small mammals.

In the 1990s, DEC held a series of public meetings to discuss the possibility of reintroducing otter to areas where they were not even a memory. These meetings resulted in a unique partnership, a group of biologists, trappers, veterinarians, and interested private companies and individuals all committed to bringing back otter to central and western New York. The not-for-profit

Various groups, including nature lovers, trappers, businesses, schoolchildren, and many others celebrated the return of river otter.

New York River Otter Project, Inc. was formed, a unique partnership where DEC worked with the private sector on a wildlife restoration project.

But restoring the species by capturing wild river otters in places where they were abundant in the eastern part of the state and translocating them to areas where they were absent would be a huge undertaking. About 100 people volunteered 54,000 hours of their time to ensure the success of the project. Businesses also contributed to this effort, like Perry's Ice Cream, based in Akron, New York, which created a new "Welcome Back, Otter" flavor, and donated the proceeds from the sale of 35,000 half-gallons of this ice cream flavor to the project. Children also chipped in: a kindergarten class contributed $35 in pennies, children donated their allowances, and a Girl Scout troop donated 1,000 towels to be used when the river otters were held in captivity (prior to being released). The efforts made by so many people from so many different walks of life was truly something to behold.

Of course, the project's success depended on the river otters. Biologists estimated that at least 270 river otters would have to be relocated from eastern New York, a daunting number, as river otter are intelligent and difficult to trap, even in areas where they are relatively common. Luckily, New York trappers rose to the challenge. Hunters and trappers have long been champions of conservation, as exemplified by this project. Trappers devoted untold time and energy attempting to capture river otter in northern and southeastern New York, contributing around 300 trap-nights to capture each river otter for this project. But the trappers were dedicated and had the needed expertise to make the project a success. Captured otter were transferred to a holding area, where they were evaluated by veterinarians and kept prior to being released into their new homes.

All told, 279 river otter were trapped and released into central and western New York between 1995 and 2000. New York became one of 22 states to reintroduce otter. The techniques developed in the New York River Otter Project were later used to ensure the success of similar programs in other states, Canadian provinces, and even internationally. The Eurasian otter (*Lutra lutra*) had suffered a similar fate as the North American river otter, and both Holland and Spain reached out to New York for advice on their own restoration projects for this closely related species. In addition, trapping techniques perfected by participating trappers formed the framework for best management practices (BMPs) for trapping river otter. These BMPs have been crucial in the management of river

otter in New York, ensuring that traps are more selective and humane, and outlining methods to avoid unintentional captures of river otters in traps set for other species, such as beaver.

While much of the fanfare died out with the last release of the relocated otters, the story wasn't over. Just because river otter were brought to central and western New York, there was no guarantee they would flourish there. And so, we returned to those river otter surveys conducted by DEC in partnership with SUNY-ESF in 2017 and 2018. Eighteen years had passed since the last river otter was released in western New York. While public sightings and limited surveys suggested that river otter were doing well, no large-scale, standardized evaluation of the population had been completed following the restoration effort.

During the surveys, biologists and technicians scouring the landscape found more than otter tracks and sign—they uncovered a restoration success story. The surveys found that river otter were flourishing in the areas where they had been reintroduced. Occupancy rates of river otter in central and western New York were similar to rates in southeastern New York, where river otter were already well established. While river otter were originally introduced to just 16 sites across central and western New York, they now are found in nearly all suitable habitats in those areas.

This leaves us with just one question: What is next for New York's river otters? Although the population appears to be doing very well, it is important to continue to monitor otter throughout the state to ensure their success. DEC biologists will be conducting another round of winter sign surveys for otter in the coming years to compare to the surveys completed in 2017 and 2018. We are also in the process of developing a management plan for river otter to ensure that their populations remain stable and that New Yorkers can continue to enjoy them for years to come. We encourage everyone to report sightings of river otter to the DEC Furbearer Sighting Survey, accessible via the DEC website (**www.dec.ny.gov/animals/30770.html**).

One of the more remarkable things about the success of river otter restoration is that it is not limited to New York. Across the entire range of the North American river otter, the species is doing well. New York is just one piece of a larger puzzle that spells out success for this species. A recent survey of state wildlife agencies found that river otter populations are stable or increasing in every state, with populations robust enough to support regulated harvest opportunities in 40 states, including New York. Of the 13 species of otter occurring worldwide, the North American river otter is the only one listed by the International Union for Conservation of Nature as a species of least concern. The recovery of the river otter across North America—and here in New York—is a true conservation success story.

"All told, 279 river otter were trapped and released into central and western New York between 1995 and 2000."

Teri LeBaron

River otters are well known for their playful nature. They are semi-aquatic mammals—at home in the water and on land.

Mandy Bailey is a Wildlife Biologist in DEC's Albany office.

Heritage Trout—A Fish Story

BY NORAH MACHIA

A good fish story is never truly finished—it continues to be shared, sometimes changing as time goes on. This fish story starts with the species itself—the popular brook trout, designated as the official New York State Freshwater Fish in 1975.

Native to New York's coldwater streams and lakes, brook trout have endured the test of time, but their numbers have declined throughout the Northeast during the past century, in part due to habitat fragmentation. The cause of fragmentation and habitat loss is often suburban development and increased paving associated with it. Such development can result in sedimentation, stormwater runoff, and reduced groundwater recharges—all potential threats to brook trout habitats.

Fortuntately, DEC researchers and citizen scientists continue to discover populations of native brook trout throughout New York. Some of these fish have been carefully studied and were determined to be "genetically distinct," confirming their distinct value as *heritage trout*.

Why the Fuss About Heritage Trout?

When fish populations possess their own distinct genetic profiles, it means they have been "reproductively isolated," and have not crossbred with stocked fish. These fish have been buffered from intense development and managed to adapt, survive, and thrive in their natural habitats. Having these diverse populations increases the resilience of New York's wild brook trout to climate change.

Studies have shown that wild brook trout have a longer lifespan than their domesticated hatchery cousins. In fact, scientists believe certain populations have resided in the same protected watersheds for thousands of years.

While several genetically distinct strains have been discovered, they still face the potential destruction of their habitats from outside sources. "Land and water conservation efforts

Remote stream fished in Tug Hill

remain critical for their continued survival," said Dr. Spencer A. Bruce, a researcher at the State University of New York at Albany (UAlbany). "The documentation of genetically unique brook trout is important because it shows the existence of biodiversity across the landscape. If you plant the same type of corn throughout New York State and a disease comes along, it will wipe it all out. The same is true for fish populations."

Having unique pockets of species with different genetic profiles means some populations may be better suited to withstand environmental changes than others. That's why it is important to preserve biodiversity by protecting the natural habitats of these fish.

"Some heritage brook trout populations may hold the genetic key to resilience, in terms of climate change and its effect on natural habitats," said Fred Henson, a senior aquatic biologist with DEC. "The protection of these watersheds remains critical for heritage trout to continue to survive and thrive."

New York State has a robust stocking program that provides recreational trout fishing in locations where it otherwise would not exist at a meaningful level if it depended on wild trout. At the same time, DEC has been doing its part to protect wild brook trout populations by carefully documenting their existence. These data have helped state officials avoid stocking decisions that risk diluting valuable genetic resources.

Identifying Unique Strains of Brook Trout

In order to document the existence of "genetically distinct" strains of brook trout, a collaborative effort was made with a group of enthusiastic anglers who volunteered their time to fish (which for many, was really no hardship at all). Representatives from UAlbany, DEC, The Nature Conservancy, and the U.S. Geological Survey were partners in the endeavor.

Many of the volunteer anglers were members of nonprofit organizations that helped with the field studies. In order to ensure accuracy with the project, Trout Power Inc., a New York-based nonprofit dedicated to protecting, restoring, and enhancing heritage brook trout and their habitats, developed citizen science protocols that were followed by all of the anglers. Members of Trout Unlimited local chapters also followed these protocols when gathering samples in their own communities.

Although volunteers collected their samples in mostly remote areas, the majority were fishing on public access lands. Anglers collected the samples by taking a small clip of the tail fin before returning the fish to the water. The samples were stored in prepared vials filled with a preservative chemical. The vials were then sent to the UAlbany laboratory for genetic analysis.

Using precise methods of extracting DNA from the fin samples, Dr. Bruce and his colleagues were able to determine if the trout was genetically distinct. Having local residents involved in the collection of brook trout samples for DNA testing helped spread the message about the importance of protecting the fish habitats in their own communities.

With the help of volunteer anglers, a number of genetically distinct populations in the Adirondacks, Catskills, and Tug Hill regions have been identified. One strain that was determined to be genetically distinct compared to other genetic profiles in the surrounding area was recently discovered in the Tug Hill region. It marked the first time such a population had been identified in Tug Hill, an indication that these fish may possess adaptations unique to their stream habitats. This is a significant find, and all involved agree that it is important to do everything possible to protect their habitat to ensure the survival of these genetically distinct trout. As such, the exact locations of where the native brook trout were discovered has not been made public, to avoid the potential for overfishing in those areas.

Volunteer angler in Tug Hill

Protecting a Unique Strain

Conservation of the "Heart of Tug Hill" has been a priority of the Tug Hill Tomorrow Land Trust, a nationally accredited, nonprofit land trust established 30 years ago. The land trust protects wildlands, forests, and farms throughout the Tug Hill region, which encompasses more than 2,000 square miles between Lake Ontario and the Adirondacks.

Portions of the core forest were recently identified as "last chance ecosystems" by The Nature Conservancy meaning if the land remains relatively unspoiled, through conservation efforts such as those being conducted by DEC and the Land Trust, the habitats that are important for wildlife species diversity will be preserved.

"This has been a major project," explained Dr. Bruce. "We are now moving forward with other studies, determining the actual difference between the populations, beyond their DNA, by studying how genes influence the behavior of the fish."

The protected forestlands in the Heart of Tug Hill give rise to major river systems that provide what many have called world-class fishing opportunities. DEC does stock brook trout in the region, but natural barriers, such as waterfalls and rapids, appear to have prevented the native brook trout from mixing with the stocked population.

DEC continues to protect native brookie populations by carefully reviewing permit applications to ensure projects such as bridge and culvert replacements do not occur during spawning seasons, and that precautions are taken to avoid adding sediment and turbidity into the water. New York State also undertakes a big stocking effort each year, with a variety of species, so there are numerous options for fishing, depending on an angler's preference.

While there are many anglers who enjoy fishing at sites stocked by DEC, others prefer to head deep into the woods for an opportunity to discover native fish, to enjoy their beauty, and release them back into the water. For some people, they feel a greater connection to the landscape by fishing for native species. With that in mind, it's a safe bet that if anglers put some distance between themselves and the nearest locations where domestic brook trout are stocked, the wild brookies they catch will likely be the descendants of the fish that recolonized New York when the glaciers retreated.

And to make sure these distinct strains remain available for future generations to enjoy, biologists will continue to study and protect them, which is great for the species and for anglers.

A former reporter for the *Watertown Daily Times*, **Norah Machia** is a regular contributor to the Northern New York Magazines. She recently released a book, *Tug Hill – Shaping the Future of the Region*.

Carl Heilman II

On Patrol

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

Dolphin Watch—Suffolk County

Several months ago, Environmental Conservation Officers (ECOs) Bobseine and Doroski assisted the New York Marine Rescue Center with locating a dolphin in Bellport Bay, off Long Island. The dolphin had been living in the bay for nearly a year. Throughout 2020, the Rescue Center periodically checked on the dolphin due to reported sightings. On a sunny winter afternoon, the two ECOs went under Smith's Point Bridge in their safeboat and watched the dolphin surface. A biologist from the Rescue Center, also onboard the vessel, quickly identified the dolphin and determined that it was healthy before it swam away.

Sniffing Out Trouble—Oswego County

Three teams of ECOs and newly acquired, young German Shepherd dogs recently completed three months of K9 Basic Training School in Pulaski. The K9 teams were put through numerous real-life scenarios, learning how to track humans through different terrain and environmental conditions, and detecting wildlife and even burnt gunpowder. The K9s were also trained in basic obedience, handler protection, and criminal apprehension. The dogs' keen sense of smell will assist in police investigations, including illegal hunting crimes and the taking of wildlife across New York State.

Wilderness Rescue—Essex County

This past January, Acting Lieutenant Forest Ranger Burns was notified of a hiker with a hip dislocation on Cobble Hill in the Saranac Lake Wild Forest, and three Forest Rangers responded to assist. Once on the scene, the Rangers evaluated the 52-year-old woman, from Lake Placid, and placed her in a vacuum splint. She was then packaged into a litter and sled, brought to the trailhead, and transferred to the Lake Placid Volunteer Ambulance Service for additional medical treatment.

Wilderness Rescue—Ulster County

Forest Ranger Slade received a report of an injured hiker on the Menla Resort property. A 52-year-old female hiker from New York City was attempting a two-mile loop on the resort's blue trail and fell down an embankment, dislocating her left shoulder; she was also mildly hypothermic. When Ranger Slade and additional Rangers arrived at the hiker's location, they warmed her, provided first aid, including placing her left arm into a sling. They then assisted her back to the trail, where she was treated by Shandaken Paramedics and transported to a local hospital for further medical treatment.

Map based on data provided by Finger Lakes Trail Conference, Inc.

TIME, TALENT, and TREASURE

The Amazing Finger Lakes Trail and its Volunteer Stewards

BY CHRISTY POST

TAKE A HIKE. While this phrase has some unfortunate connotations, in general, it's good advice. There's something special about hiking in nature—the clean air, beautiful scenery, views of wildlife, and more. Taking a hike can refresh the body and mind.

The Finger Lakes Trail (FLT) System offers amazing opportunities for people to enjoy nature on a hike. If you want to take a short hike near home with young children, you'll find many options. If you are looking for a strenuous hike, there are sections requiring various skills and offering distances from one mile to hundreds of miles.

The FLT System is New York State's longest continuous footpath, with a main trail of 580 miles, six branch trails, and 29 loop trails and spur trails that total an additional 480 miles, as well as connections to trails in Canada, the Long Path and Appalachian Trail in Vermont, and the North Country National Scenic Trail all the way to North Dakota. But, with more than 1,000 miles of trails in New York alone, hikers have beautiful trails to explore without ever leaving the state.

With so many miles of trails, the management and maintenance of the FLT is a substantial task. In 1962, the non-profit Finger Lakes Trail Conference (FLTC) was founded by a group of extremely dedicated volunteers. Ironically, from the outset, much of the FLTC's planning took place in the living rooms, basements, and kitchen tables of its volunteers. The organization's office was originally located in the home of its founding president, Wallace D. Wood. Thirty-nine years later, in 2001, the FLTC Service Center opened in Mount Morris, with a mission "... to build, protect, enhance, and promote a continuous footpath across New York State. Forever!"

Each year, more than 500 volunteers work on projects to support the trail, often working with affiliated hiking clubs or organizations that helped build the trail. Each successive generation has risen to the task, and today, students play an important, active role in maintenance of the trail.

The FLT would not be possible without the volunteers who donate more than 20,000 hours each year in support of the trail. These are people like Rob Hughes, a high school science teacher who has donated his own time and talent to the FLT and has introduced a new generation of trail lovers to the trail by involving his students (see sidebar "Teacher, Volunteer, and Trailblazer").

As is typical for long distance trails, the FLT was built sectionally by different groups. Existing hiking clubs in upstate cities adopted specific sections and started building the planned cross-state trail in chunks, utilizing State Forests and State Parks whenever possible. The trail route was planned to meander generally south of the Finger Lakes, connecting new segments with just enough coordination to ensure that each segment would eventually connect with another one. In fact, thirty years had passed

Enjoying State Forests

Did you know that New York has 470 State Forests and Unique Areas, covering nearly every area of the State?

Along the Finger Lakes Trail, hikers may travel through a State Forest (or more than one) that is managed by DEC. In fact, the FLT passes through more than 42 State Forests, four Wildlife Management Areas, and three Forest Preserve Areas.

State Forest lands are managed by DEC's professional foresters, who monitor conditions and work to address threats and challenges, such as invasive species, shifting land use trends, and climate change. The goal is to ensure these lands, which comprise a total of more than 77,000 acres statewide, continue to provide benefits ranging from the protection of vital natural resources and drinking water, to outdoor recreation, to forest product manufacturing and other economic benefits, and mitigation of climate change.

As you hike along a trail in a State Forest, or camp overnight under a State Forest canopy, you can enjoy the natural beauty of these amazing resources, clear your mind and immerse yourself in nature, yet still be connected to society. You can also take comfort in knowing these resources are being managed in a manner that protects their lands, waters, and beauty, and keeps them accessible to the public.

To learn more about DEC's management of State Forests, visit **www.dec.ny.gov/lands/40672.html**.

Adk-Onondaga volunteers help build, maintain, and improve trails in the Finger Lakes Trail system to provide a safe and enjoyable experience to all trail users.

Volunteers create maps and install signage and markings along the 1,000+ mile trail to ensure hikers of all skills and abilities can navigate the trail easily and safely.

before the main east-west trail was complete. Finally, the ceremonial last gap was closed in 1992 in Central New York. From the beginning, branch trails were planned to shoot northward off the main trail, aiming for the Bristol Hills and the east side of Letchworth Gorge; one branch trail runs from Ellicottville to Niagara Falls.

Eventually, the North Country National Scenic Trail (NCT), begun in 1980, coordinated with the FLT to enable people to walk from North Dakota to Vermont. Much of that vast trail utilizes more than 400 miles of the FLT before it angles northeast toward the Adirondacks. And yes, several dozen people have already walked the whole 5,000-mile trail!

As the years have progressed, the volunteers of the FLT have adapted to more sophisticated tasks now required. Maps have grown into digitally created wonders, after years of hand-drawn paper versions. And the "office" in a volunteer's basement is now the fully staffed Service Center housed at the Mt. Morris Dam, courtesy of the U.S. Army Corps of Engineers.

While much of the trail is on public land—DEC State Forests and Wildlife Management Areas, State and county parks, and land trust preserves—about half of it is on private land, with permission granted for access and use. Most of these private-use permissions are handshake only and are temporary and revocable. But in the last 20 years, FLT volunteers have arranged for many miles of permanently protected private permissions. These are mostly permanent easements created with generous landowners, though some are creative combinations of special permissions with land trusts and State agencies like DEC.

The route of the Finger Lakes Trail has been created and protected by many heroic volunteers. The magnitude of the task brings out the best in a lot of hiking enthusiasts, and their efforts benefit all the people who utilize this unique resource.

Are you up for the challenge and fun of taking a hike on the Finger Lakes Trail? Whether you are looking to take a short, leisurely day hike or want to head out for a longer journey, the FLT offers many options for individuals, groups, and families. Check it out.

Christy Post is the Director of Marketing and Communications at the Finger Lakes Trail Conference.

Author's note: Long time FLTC volunteer Irene Szabo made significant contributions about the organization's history to this article.


Christy Post

Materials for a lean-to are prepared offsite, then delivered for assembly and installation on the FLT.


Christy Post

The author and some friends enjoy a hike on the Finger Lakes Trail.

Teacher, Volunteer, and Trailblazer

Rob Hughes' involvement with the Finger Lakes Trail started on New Year's Day 1999. While exploring the FLT's Bristol Hills Branch (Ontario County), Rob stumbled across the smoldering remains of the old Evangeline Shelter that had burned the night before due to an unattended campfire. The shelter is located near the trailhead at Bean Station Road, at the base of a climb up into Urbana State Forest, on property that was then owned and generously shared by Bill and Ellen Garrison. Bill and Ellen would eventually rebuild the shelter into an iconic two-story structure, which piqued Rob's interest in building shelters for the FLT. But before that, Rob got involved in a very different project.

Rob is a science teacher at Wayland-Cohocton Central School. On that New Year's Day hike in 1999, he was headed for the Huckleberry Bog Nature Loop (Steuben County). Undeterred by the ruins of the shelter he'd passed, he climbed the hill and arrived at the register box to discover a collection of guidebooks for the Loop.

Rob explained, "The guidebooks were created by Irene Szabo (the current editor for the FLTC's quarterly publication *Finger Lakes Trail News*) and fellow volunteers, to highlight the unique microclimate of the bog. The guide was cleverly keyed to numbered metal tags at numerous reference points along the trail. I remember being particularly struck by a stop called 'The Hugging Trees,' an oak and hemlock wrapped around each other, in a woodland embrace. My first thought was 'How did I not know about this place till now?' And my second was to bring my science students to the bog and share this unique setting with them."

Rob began corresponding with Irene and asked if he and his AP Biology students could update the guidebooks, adding computer-generated mini maps. Irene was thrilled to have the help and, pleased with the end results; she invited Rob's students to build new trail registers to house the booklets upon their completion. Their first edition came out in 2000, with updated versions in 2005 and 2010. This effort brought the work of the FLT into Rob's classrooms, and brought his students out onto the trail. It was the start of a two-decade long relationship between Rob, his students, and the Finger Lakes Trail.

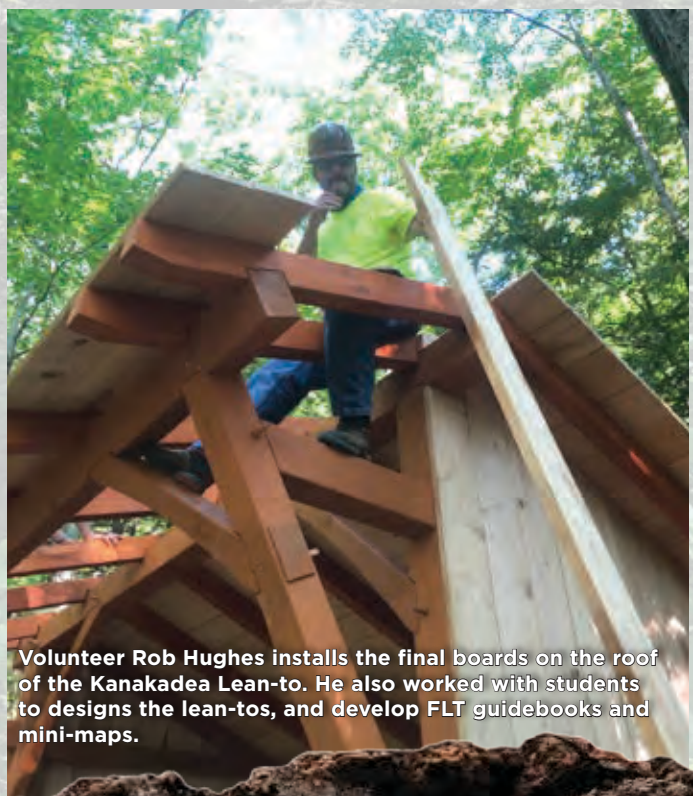
The Garrison's built a new log lean-to to replace the one that had burned. Rob became captivated by this project. He wanted to build one, but something a little different. "Although the traditional log lean-to is iconic," Rob said, "I thought it might be a nice challenge to design a timber framed lean-to shelter that could be cut and prepared off-site and then transported in pieces to the remote worksites more easily and installed in just a few days. I met with a handful of FLT Conference leaders to discuss the potential, and everyone agreed it was worth a try."

Rob designs the structures, then cuts and mills the pieces in his home workshop and then brings them to the worksite to be installed. Before the structures even make it to the worksite, Rob has put more than 80 hours into the project. The shelters are assembled on site by volunteer work crews known as "Alley Cat Crews," so named because the Finger Lakes Trail spans from Allegany State Park in the west to the Catskills Preserve in the east.

Rob has designed and built a total of six timber framed lean-tos for the FLT, tweaking the design each time to make it "a little more perfect." He has involved his students in the design and production of these and other timber frame projects over the years. It is Rob's belief that involving his students in this work teaches them critical practical skills and makes them better citizens for having worked in service of others.

Of his work with the Finger Lakes Trail, Rob says that he hopes it will "fulfill its ultimate purpose by inspiring others to share their time and talents with the organization in perpetuity."

If you'd like to get involved with the Finger Lakes Trail, including helping to create, maintain, reroute, or improve the trails, visit **www.fingerlakestrail.org** or email **fltinfo@fingerlakestrail.org**.



Volunteer Rob Hughes installs the final boards on the roof of the Kanakadea Lean-to. He also worked with students to designs the lean-tos, and develop FLT guidebooks and mini-maps.

The Rewards of Today's Kayak Fishing

BY TYLER SWEET

It was a calm, warm morning in early June when I pulled into a remote parking lot, deep in the Adirondack Park. The lot was empty and all that could be seen were hemlock and birch trees and a small trail winding off into the woods. I walked around to the back of my truck, undid the straps that were holding my kayak in place, and slid it onto a small hand cart and secured it down. I loaded up a handful of rods, my tackle crate, and other miscellaneous fishing gear, and headed into the woods.

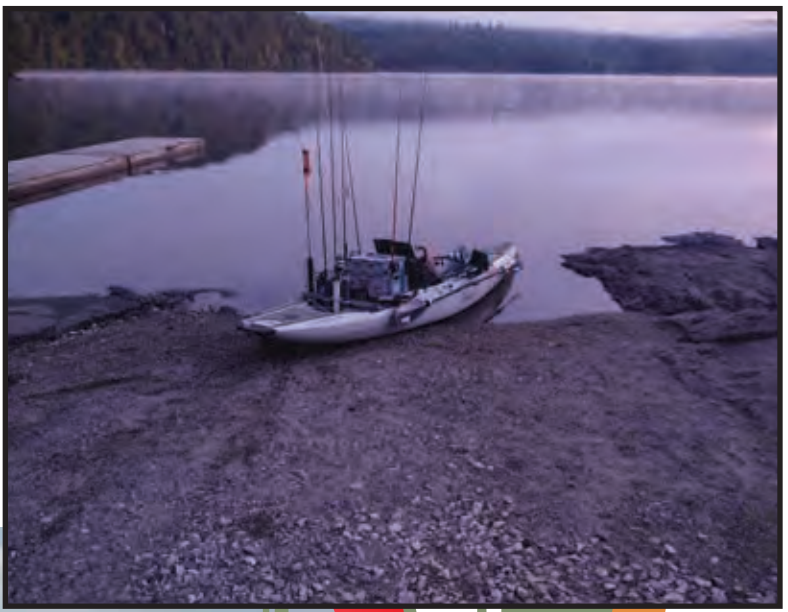
About a half-mile in, the trail opened up and revealed a pristine remote lake. Daylight was just breaking, and the world was starting to wake up. As I silently slipped my kayak into the water and paddled away, the sounds of frogs, insects, and birds welcomed the new day.

Not far from shore, I turned on my sonar fish finder and started scanning what lay beneath the surface of the water. I pumped the pedals of my Hobie Outback kayak, letting my feet do the work, while I rigged a few rods. It wasn't long before I found what I was looking for: some old vegetation just starting to grow back.

I pulled out a trusty Rapala crankbait, one of my go-to lures this time of year, stood up, and began working it over the top of the new weed growth. It only took a few casts before I landed my first fish, a gorgeous 1.5-pound smallmouth bass. A nice fish, but not my target species for that day.

I left the weed bed and began flipping a jig near some trees in the water. I was catching some nice largemouth, including a healthy looking three-pounder, but it still wasn't what I came there to find. The wind was just starting to blow a little harder, but this was no bother. I sat down and pointed the nose of my boat into the wind. With a gentle pedal of my feet, the boat held position while I continued to fish.

Modern fishing kayaks can be fully equipped with fishing gear, and when used with a hand cart allows anglers access to remote waterways.



I switched tactics again and changed to a lipless rattle bait. I was casting around some of the rocky shorelines when she finally struck. This northern pike was about 34 inches long and weighed roughly eight pounds, but when it hit my bait, it felt like a world record tuna!

I fought it back to the boat and scooped it in the net. After getting some good pictures, I put her right back in the water, to swim another day. That was the fish I was looking for, and I still had plenty of time left to maybe find a true giant.

The rest of the day yielded a mix of more bass and pike, and even a couple small yellow perch to boot. Nothing giant, but a successful day on the water. The best part was that I had the lake nearly all to myself. The only other person out in this remote area was a single paddler enjoying a leisurely trip around the lake. With limited access, only those willing to haul a canoe or kayak back in there would be rewarded with the scenic views and nearly untouched fish.

It was getting late when a storm started to move in. Thunder rolled in the distance and being on the water, in any craft, wasn't going to be a good idea if those clouds got any closer. I made my way back to the trail, carted my kayak to the truck, and within a few minutes loaded up in the nick of time, just as the rain started to fall. As I headed back down the road home, my thoughts went back to the day's catches, thinking that I would certainly be coming back.

That remote Adirondack lake was just one of thousands of lakes, ponds, and reservoirs in New York State, ranging from small man-made impoundments of less than 50 acres all the way up to portions of Lake Erie and Lake Ontario, which are thousands of square miles. Many of these waterbodies, like the one I explored, can only be accessed by those willing to haul a boat down overgrown and rarely used paths through the woods. But for those willing to do so, the benefits can be great.

These waters are home to more than 20 varieties of freshwater gamefish, providing anglers countless opportunities for both leisure and bringing home some quality table fare. Modern kayaks are ideally suited for both exploring the remote areas of the Adirondack Park for trout and bass, or going out on the Great Lakes in search of much bigger quarry.

Canoe and kayak fishing is not a new concept, by any means. Dugout canoes have been used for millennia, by people for fishing and transportation. In recent years, however, a rapid growth in the popularity of kayak fishing has led to huge advancements in the sport. Modern kayaks are now able to provide more people with better opportunities to chase whatever gamefish they desire.

I have spent hours trolling spoons on Lake Ontario for salmon, pulling crawler harnesses on Great Sacandaga Lake for walleye, casting tubes for crappie on small ponds, tournament bass fishing in the Finger Lakes, and everything in between. All this, from a little plastic boat tossed in the bed of my truck.

In 2020, there was an unbelievable growth in kayak sales across the nation. People everywhere were looking for ways to get outside, get away from crowds, and enjoy the outdoors. Kayaking was an obvious answer. One thing that drew people to kayaking was the relatively low cost of entry and the simplicity of the sport.

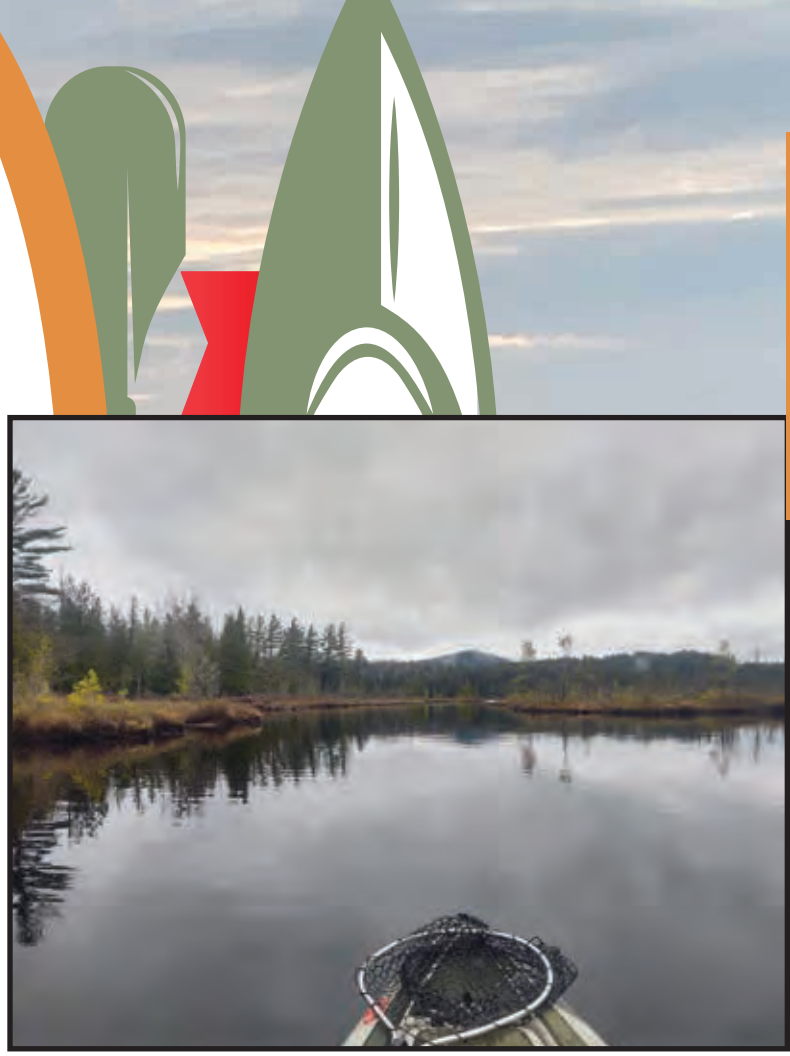
Basic kayaks can be purchased for only a few hundred dollars and can easily be transported on top of any vehicle. They are made from either HDPE (high-density polyethylene) or ABS (Acrylonitrile Butadiene Styrene), which makes them very durable and long lasting. They can handle accidental drops or banging into the rocks without much worry of damage. Add a simple PFD (personal floatation device) and a paddle, and you're ready to go!

But the leisure side of kayaking is only half the story; the other part is their fishability. Today's modern fishing kayaks are vastly different from their old recreational ancestors.

First, most fishing kayaks are "Sit on Top" style boats. This means they have an enclosed hull and the angler sits on top of, rather than inside, the boat. This design provides many advantages, chiefly stability and capacity. Some kayaks can hold upwards of 500 pounds, and it is still difficult to actually flip them over. The angler is more likely to fall out of the boat than flip it.

The increased stability means that even the least graceful of people (myself included) are able to easily stand up to fish or actually walk around the deck without feeling like they will fall. It also means that these boats are well-suited to big water. Normally, you would never take a kayak three miles offshore, out onto Lake Erie, but with modern fishing kayaks, you can, though I would caution that it's for more experienced kayakers.

The next major difference in fishing kayaks is their propulsion. Everyone recognizes a kayak paddle, but when I am on the water, my paddle stays tucked away. As noted earlier, my boat is equipped with a pedal drive system. These systems are either fin-based, like on a Hobie Outback, or propeller-based such as a Feelfree Lure. In both systems, the kayaker actually operates foot pedals to propel the boat forward, or backward, leaving your hands free to fish, grab a snack or drink, or even take pictures.



The pedal drive propulsion system of modern kayaks frees an angler's hands for more fishing.

New York State Fishing Regulations

Before fishing in New York State, anglers should make sure to look up the fishing regulations for the fish species and the waterbody they will be fishing. To learn about New York State's Fishing Regulations, visit: www.dec.ny.gov/outdoor/31421.html.

Having a pedal drive is a huge advantage for the kayak angler because it allows you to fish while maintaining boat position. Calm days are few and far between here in New York. Being able to fish a spot without the wind pushing you away is crucial, and with a pedal drive kayak, it's a breeze.

The last, and probably biggest, difference between recreational and fishing kayaks are the accessories, and boy oh boy, can you accessorize a fishing kayak! You no longer need to pick and choose what goes into a small tacklebox, stored between your legs. You can add a tackle crate full of all the baits you could possibly want. And rod storage? Between the built-in rod holders and ones that you can mount to the boat, it's not unheard of for a tournament kayak angler to have a dozen rods on board, ready to be used.

You can even equip a powered anchor pole, lights, GoPros (digital camera), and/or a Dakota Lithium battery, and you can't forget a sonar unit. Any quality fishing boat will be equipped with a fish finder, and modern fishing kayaks are no different. Many will come with pre-installed mounts for transducers, and they are set up to run any cables necessary. Anglers can install a simple 2D sonar, GPS units with Side Scan technology, or even the most advanced live targeting sonar systems around.

With all these accessories, your fishing kayak can have all the luxury of a fully equipped bass boat, minus the 250-hp motor, of course. And what about trolling motors? Well, even those can now be installed on the bow of larger kayaks, giving you all the advantages of a powered system.

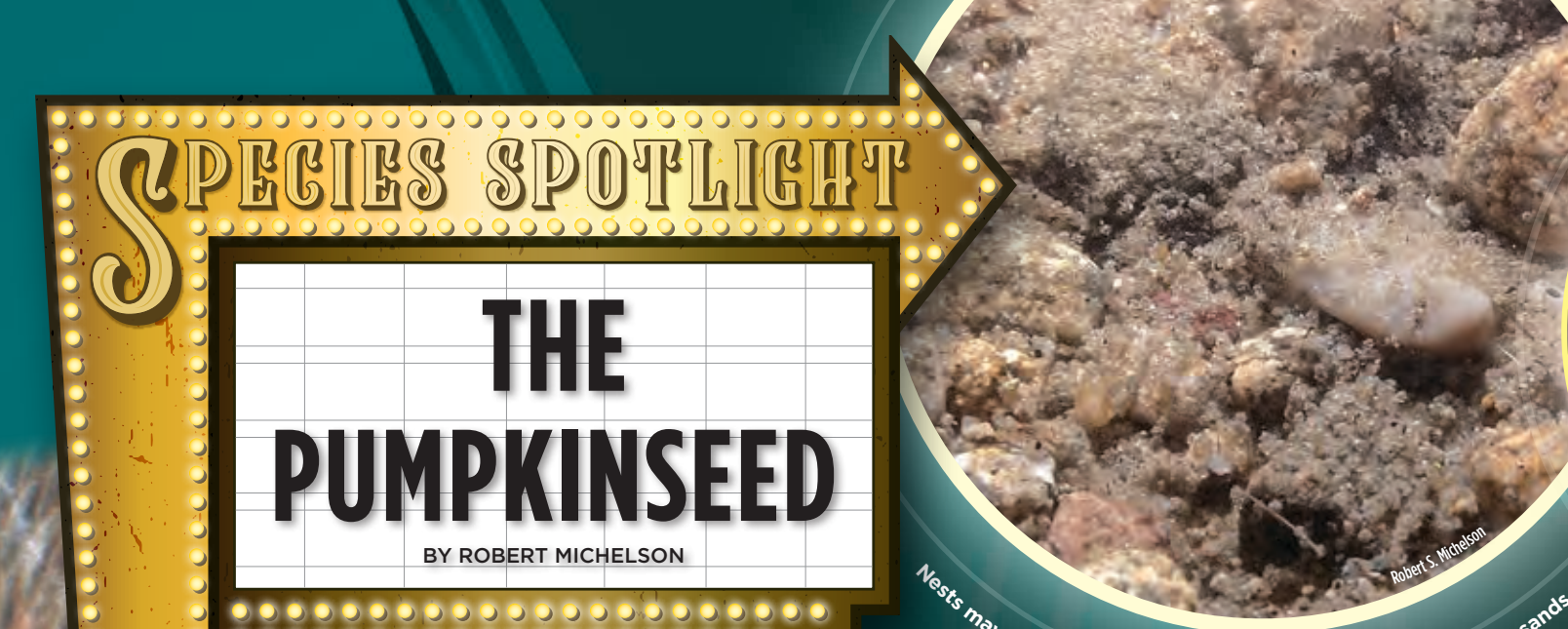
From Long Island to the Adirondacks, and from Champlain to Chautauqua, the waters of New York State are now more accessible than ever for kayaks, with boat ramps, trails, parks, and even roadside launches available to help you enjoy your latest adventure. Whether you are taking out a tub of worms and a single rod to catch panfish, or you are rigging up a fishing kayak with all the bells and whistles to compete for thousands of dollars in one of the many kayak bass fishing tournaments, the opportunities for kayak fishing in New York State are endless. So, toss that boat on top of the car, head to your nearest lake (which I'm sure isn't far), and go fishing!

Tyler Sweet is a native New Yorker who grew up in Chenango County. He has a degree in Environmental Engineering from the University at Buffalo and is an avid outdoorsman, hunting and fishing during all seasons. Tyler is also a tournament kayak angler and president of NY Kayak Bassmasters.

SPECIES SPOTLIGHT

THE PUMPKINSEED

BY ROBERT MICHELSON



Robert S. Michelson

Nests may be used by more than one female and can hold thousands

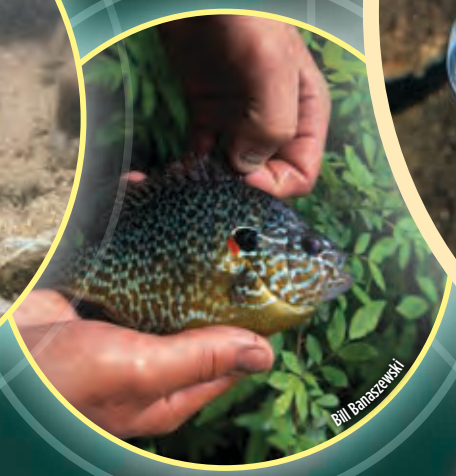
Robert S. Michelson

One of New York's most colorful freshwater fish species, the pumpkinseed (*Lepomis gibosus*) is a popular fish with anglers, and a favorite of small children. It is native to the upper Mississippi River, the Great Lakes, and east coast drainages from New Brunswick to South Carolina, and is found in waters across New York State. Interestingly, the little pumpkinseed found in your local water is a relative of the much larger smallmouth bass of the big rivers and lakes of New York—they are both members of the sunfish family. In fact, there are 14 species of sunfish that live in New York's waters.

Description/Diet/Behavior

The pumpkinseed is the most widely distributed and abundant member of the sunfish family in New York. They are found in every corner of the Empire State, including Long Island.

Pumpkinseed average five to six inches in length, although they can reach up to 10 inches. Often mistaken for bluegill or redbreast sunfish, pumpkinseed can be identified by a bright orange/red spot on the rear margin of their gill plate (operculum)—one located on each side of the fish, just above the pectoral fin. Their pectoral fins are long and pointed, and the caudal (tail) fin is forked. Adult pumpkinseeds may have a rainbow spectrum of colors running throughout their bodies, and a bright orange belly. They also have bluish green streaks on their head, radiating out from the mouth and eyes.



Also known as common sunfish, pumpkinseed are highly adaptable, capable of living in both lake and riverine habitats. They are usually found in or near aquatic vegetation along the shorelines of warmwater lakes and ponds, using weed patches, docks, shipwrecks, and logs for cover. In rivers and streams, pumpkinseeds usually inhabit backwaters and deeper pools with little current, although they may be found in faster moving water if there are slower flowing reaches nearby.

Pumpkinseeds feed heavily on snails and have powerful jaws and teeth that enable them to crush and break-open shellfish. They feed mostly on the bottom of a stream, lake, pond, or reservoir, where they will also eat aquatic insects and small fish.

Life History

Pumpkinseeds spawn in late May to August. Males prepare nests which they defend against other fish. The females have no part in nest building. The males construct each nest by rapidly finning over the bottom of the waterbody they inhabit, clearing gravel, sand, vegetation, or other material until they have made a clean, circular, slightly depressed area that can resemble a sand crater. Nests are usually found in areas of submerged vegetation in six to 12 inches of water, near the edge of a lake, pond, reservoir, or stream.

Pumpkinseeds nest in colonies where nests can be very close. Two or more females may contribute eggs to a nest, which are fertilized by the male. Females will often deposit eggs in several nests and then leave after spawning. Males, however, will remain in one nest and stay to guard the eggs and young.

Nests may have several thousand eggs each. Although the nest is guarded, other males may rush in and fertilize eggs. It takes about three days for the eggs to hatch, and each nest may produce more than 14,000 young pumpkinseeds.

Pumpkinseeds bite voraciously on nearly any type of natural bait, providing it is small. They will also bite on a variety of small artificial lures; flies are especially effective. Their wide distribution, abundance, unhesitating tendency to bite on worms, and close proximity to shore have made pumpkinseeds a favorite among young anglers. They make fine eating.

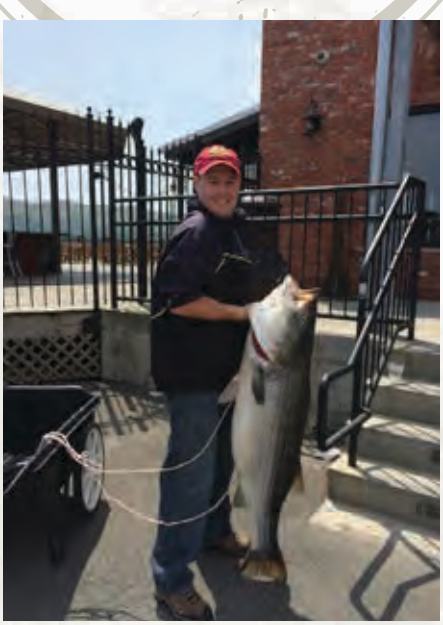
Robert Michelson has been a professional photographer/videographer for more than 30 years. A certified SCUBA diver, he specializes in underwater photography and videography. You can visit his website at **https://pbmphoto.photoshelter.com**.

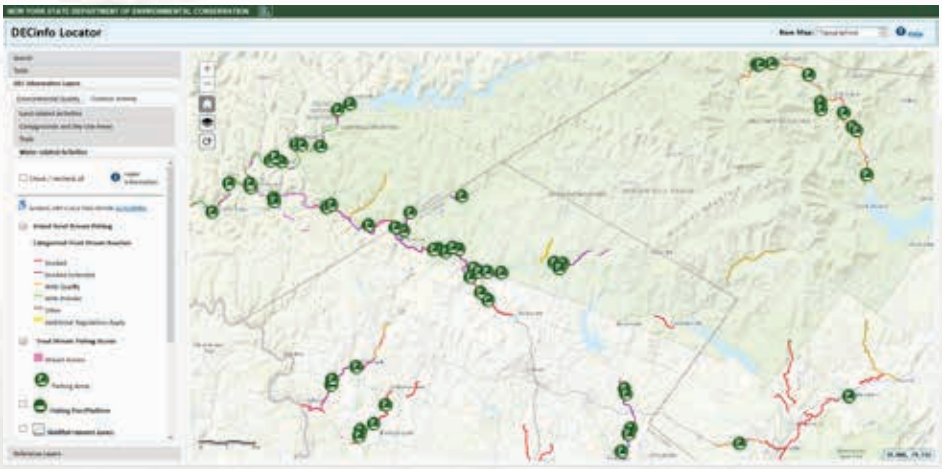
Fun Facts

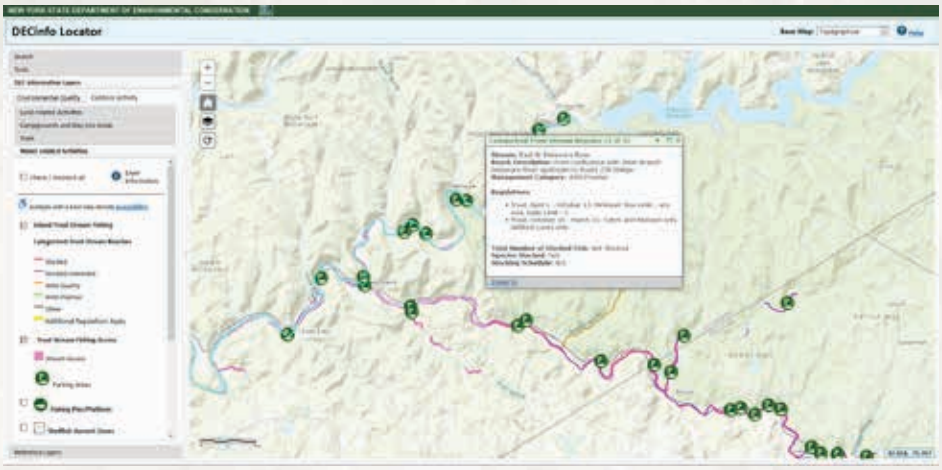
- The species name "*gibbosus*" means that it is "formed like the full moon."
- Pumpkinseeds are New York's most common native sunfish. They can tolerate poorer water quality than other fish species, surviving periods of low oxygen, and tolerating muddy or acidic water.
- They are easily caught in shallow water using small lures or live bait, and make a good introduction to fishing for young children.

New Trout Stream Maps

DEC's interactive mapping application, DECinfo Locator, has recently been updated to include inland trout stream fishing data layers. Anglers will be able to view trout stream reaches color-coded by management category (see page 4), and fishing access associated with those reaches. Categorized trout stream data includes the reach description, the management category, and trout fishing regulations. Information about whether the reach is stocked, the total number and species of trout stocked, and stocking schedule is also available. Access information includes access type and parking locations. These layers will allow trout stream anglers to plan trips and easily find their preferred trout stream fishing experiences. To access the trout stream maps, visit: **www.dec.ny.gov/outdoor/122444.html**.







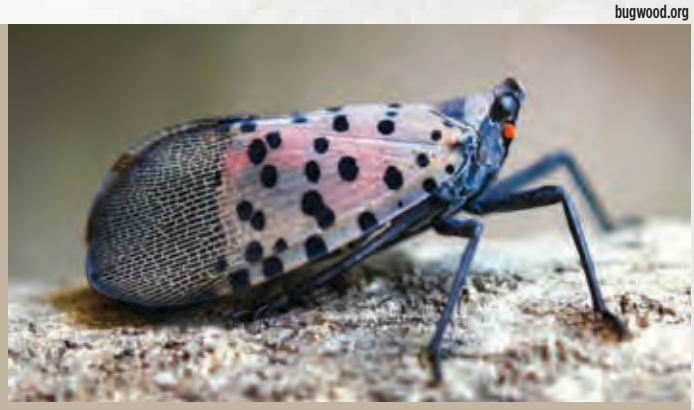
DEC Seeks Volunteer Striped Bass Anglers

DEC is looking for participants to join the Striped Bass Cooperative Anglers Program to help biologists understand and maintain a healthy striped bass population. DEC provides volunteer anglers with logbooks and instructions to record catch information, such as fishing location, gear used, and the number of fish caught. Anglers may participate by fishing from a boat or from shore, and can use DEC's new online logbook to record catch information on their smartphone or computer. Biologists will analyze the recreational fishery data and send it to anglers in a newsletter, providing an inside look into the striped bass fishing season. Volunteer anglers play a crucial role in assisting DEC in managing this species. To learn more about the program and how to volunteer, visit: **www.dec.ny.gov/outdoor/7899.html**.

2020 Lake Erie Fish Survey

For the past 40 years, DEC Lake Erie Fisheries Research Unit has set gill nets to assess Lake Erie's warmwater fish community. The primary goal of the survey is to collect information on the abundance and age of walleye, yellow perch, and smallmouth bass. In 2020, a rare species—stonecat (mini members of the catfish family)—was caught, as well as some extraordinarily large spottail shiners. The stonecat was the first of this species ever sampled in the netting survey. The results from the 2020 warmwater assessment were published in the Lake Erie Research Unit's annual report and are available on the DEC webpage at: **www.dec.ny.gov/outdoor/32286.html**.

bugwood.org



Help Combat Spotted Lanternfly

DEC, NYS Department of Agriculture and Markets, and the NYS Office of Parks, Recreation and Historic Preservation recently announced an innovative effort to combat the spread of spotted lanternfly (SLF) in New York State. SLF is an invasive and destructive pest that feeds on more than 70 plant species and poses a significant threat to the natural communities and quality of outdoor recreation in New York State. The new initiative invites volunteers to sign up to survey a specific area of land and then enter data from their survey work on iMapInvasives. For more information about SLF, how you can help reduce the spread, and view a series of training webinars, visit: **https://www.nyimapinvasives.org/slf**.

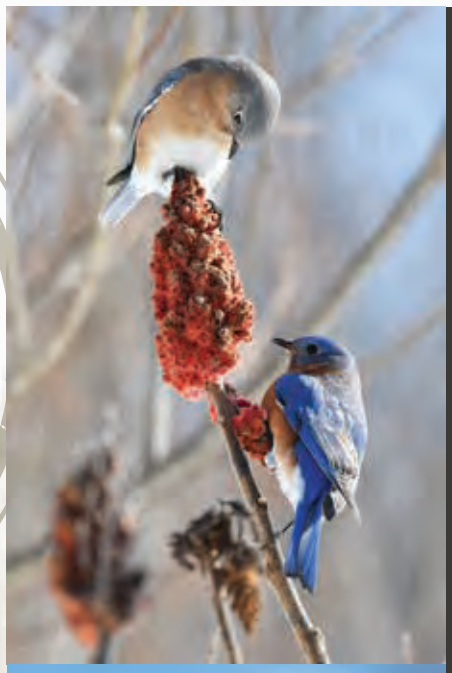
New Fishing Access in Broome County

DEC, with assistance from the Village of Deposit's Division of Public Works, recently constructed a new parking area that provides fishing access to Oquaga Creek in Broome County. A local civic sports program received a State grant to convert the site, a former milk plant, into a sports complex and community park. As part of the multi-use plan for the site, the DEC parking area provides a formal designated area for anglers to access Oquaga Creek and a Public Fishing Rights easement. Oquaga Creek is stocked annually with about 3,400 one-year-old brown trout, and 370 two-year-old brown trout. For information about Oquaga Creek and a map of public fishing rights, visit: **www.dec.ny.gov/docs/fish_marine_pdf/r7oquaflypfr.pdf**.

brown trout

Why did the Salamander Cross the Road?

Some salamanders and frogs emerge from winter hibernation on rainy nights in April, to make their way from the forest to woodland pools, where they'll mate and lay eggs; there can be hundreds of amphibians on the move. Because forest and wetland habitats are often disconnected by development, many migrating amphibians need to cross roads, leading to their death. Since 2009, the Amphibian Migrations and Road Crossings (AM&RC) Project has enlisted volunteers to find locations where migrations cross roads; document weather and traffic conditions; record migrating amphibians; and help them across the road. To volunteer and to learn more about AM&RC, visit: **www.dec.ny.gov/lands/51925.html**.



Go Native

I was fortunate to capture these eastern bluebirds on a late winter day. Birds rely on native plant seeds, berries, and fruits for survival throughout the year. These bluebirds were foraging on native staghorn sumac, a critical late winter lifeline for many types of wildlife.
BILL MASSARO | ELMA

Gorgeous photos, and a great reminder about the importance of native plants. Unfortunately, many of the plants that people add to their landscaping are non-native, and often have little or no benefit to local wildlife. Native plants provide food for many different species, including pollinators, and because they are adapted to the local climate, often require less water or other inputs to keep them alive and healthy.

Bears on the prowl

This black bear was photographed while snacking from our bird feeders.
MIKE PLOUFFE | MEDUSA

Black bears are emerging from their dens this time of year, and they are looking for easy meals. It is not uncommon for them to visit bird feeders in the spring, since birdseed is a high-energy snack and easy to obtain. Unfortunately, this often turns the bears into nuisance animals, and can lead to property damage or even confrontations with humans and pets such as dogs. DEC highly recommends that bird feeding activities cease by April 1 and not resume until November 30 if you live in bear country.

The Band is Back

I wanted to share some photos with you that I have taken of bald eagles feeding on a deer carcass during the winter in Lewis County. At times I have seen more than 45 birds in the vicinity, and this bird with the bands is a regular visitor.

BILL STRAITE | LEWIS COUNTY

Thanks for sharing these fantastic shots with us. Based on the band number, we were able to track down some information and discovered that this particular eagle was banded in June 1995 in St. Lawrence County, shortly before I started working for DEC.

—Andy MacDuff, DEC Wildlife Biologist

Strutting His Stuff

I love seeing the tom turkeys strut their stuff in the spring for the ladies.

CLAIRE TALBOT | BRIGHTON

Great photo, thanks for sharing. Turkey breeding season begins in early April and continues through early June. During this time, the toms perform courtship displays—strutting, fluffing their feathers, dragging their wings and gobbling—all in an effort to attract willing hens. A single tom will mate with many hens.

It's Been Fun

Dear Readers—

This April issue marks my last one as editor of *Conservationist*. After 39 years of being professionally involved with the magazine, I'm retiring and planning on spending more time outdoors with my family and friends, pursuing the recreational activities I love.

During my tenure with DEC—first doing field work and outreach for DEC's Bureau of Fisheries (including writing articles for *Conservationist*) before joining the magazine—I've been fortunate to have many exciting experiences to write about, including working with musky on the St. Lawrence River, assisting in a goose drive, climbing into a bat cave, looking for feral hogs, and tagging along with biologists to a bear den. It's been a most interesting career.

I'd like to thank all our readers for their support and ideas through the years. We've been blessed to have a loyal cadre of readers, including many who collect the magazine. Clearly, it's our readers who have made *Conservationist* successful for 75 years!

While it's hard to leave, I know the magazine is in great hands. We are fortunate to have an incredibly talented, dedicated group (editors, designers, photographers, and our business manager) who work tirelessly to produce each issue. I'm proud of our work to connect our readers with New York's amazing resources.

To borrow Bob Hope's line—thanks for the memories.

Stay well, and hope to see you on the water,

Eileen Stegemann

CONTACT US!

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Back Trails

Perspectives on People and Nature

Thoughts on Birds

BY JEREMY TAYLOR

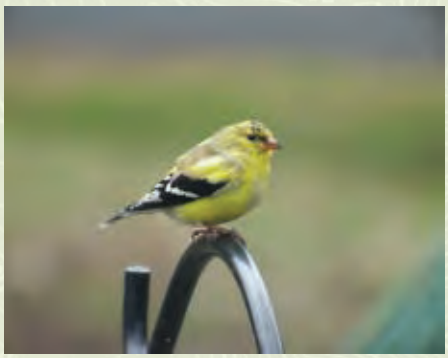
Birds have been an important part of my life for as long as I can remember, an interest that was instilled in me at an early age by my late grandfather and great-aunt. Growing up on a farm out in the country, I had plenty of opportunities to see birds; many different species could be found in the fields, woods, swamp, and pond on the property. Although I have never taken a trip with the sole purpose being birding, I always keep an eye out for them, and many of the trips I have taken over the years have been marked by sightings of birds.

I can associate certain birds with many of the places I have been. From seeing common eiders along Schoodic Peninsula in Maine, while visiting my grandparents, to painted buntings along the Texas Gulf Coast, while on a trip with my parents. In college, I spent 10 days on the Caribbean island of Dominica as part of a Tropical Ecology course I was taking. I saw many new species there, the highlight being both parrot species endemic to the island, the imperial and red-necked Amazons. A few summers ago, I attended "Sharing Nature: An Educator's Week" at Hog Island Audubon Camp in Maine, and one of the memories I will always hold of that

experience was the boat trip to view Atlantic puffins nesting out on Eastern Egg Rock Island.

When I was a child, bald eagles were one of my favorite species of birds, and I cut photos of them out of magazines and saved newspaper clippings about DEC's bald eagle hacking program. I even "adopted" a bald eagle named Prairie, who was a non-releasable resident of Audubon's Center for Birds of Prey in Maitland, Florida. I fondly remember one family trip to Walt Disney World when we took a side-trip to the Center, and I got to actually "meet" Prairie. Even to this day, every time I see a bald eagle it is a bit of a thrill, even though they are much more commonly seen now.

Birds have played an important role in my professional life as well, from caring for more than 300 species of (mostly) exotic birds during my early career as a zookeeper, to counting endangered snail kites (from an airboat) and endangered wood storks



(from a helicopter) when I was a wildlife biologist working in the Everglades.

I have always enjoyed feeding and watching wild birds, and usually take part in the annual Great Backyard Bird Count (GBBC) organized by the Cornell Lab of Ornithology. The most recent GBBC even included a new species for me—common redpolls—here in New York State, thanks to a large irruption (migration) from the north.

I associate certain birds with the seasons and look forward to their return each year. From the return of red-winged blackbirds in early spring,

to the sightings of the first ruby-throated hummingbirds and house wrens later in the season, I always take note of them. The brilliant red of a northern cardinal in winter and the orange flash of a Baltimore oriole in spring never go unappreciated, and the calls of owls around my house at night are always fun to hear.

If you are new to birds, or want to learn more about them, I recommend checking out DEC's I Bird NY program at **https://www.dec.ny.gov/animals/109900.html**. Who knows, maybe they will become an important part of your life too!

Jeremy Taylor is editor of *Conservationist for Kids*, and also manages the *Conservationist's* online presence.

1 PICK A SITE

Make sure there aren't any underground utilities where you are digging and avoid locations with overhead powerlines, unless planting short trees. Be aware of buildings, structures, roads, sidewalks, etc. that could be damaged as the tree grows or would limit its growth.

2 PICK YOUR TREE

Choose a species that can handle your site's growing conditions. Know the hardiness zone, soil type, acidity level, amount of sun, and whether the height and width of the full-grown tree will fit your space.

Native species are best since they are adapted to the local climate, plus they provide wildlife habitat. Using a variety of species protects against outbreaks of pests and diseases.

3 PLANT YOUR TREE

Make sure the root collar is at the soil line—too deep, the stem could rot; too shallow, the roots may dry out. For specifics on planting balled, burlapped, container-grown, or bare-root trees, visit **www.dec.ny.gov/lands/5303.html**

4 CARE FOR YOUR TREE

For the first few years, water at least once a week; more often in hot, dry weather. Mulching will help maintain moisture—but don't pile it against the trunk. Install tree tubes or fencing for the first few years to prevent wildlife damage.

For information on caring for urban or suburban trees, visit **www.dec.ny.gov/lands/4957.html**.

CELEBRATE

Arbor Day by Planting a Tree

Planting a tree is a great way to celebrate Arbor Day. Proper preparation and care will help ensure you enjoy its beauty and benefits for many years.

NEW YORK STATE | Department of Environmental Conservation

See page 10