# Annual Review 2018

# **GREATHONOV** Nature Preserve & Ecological Research Center

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### FROM THE EXECUTIVE DIRECTOR



They say time flies when you're having fun. Well, I must have been having a great time in 2018 because the year seems to have come and gone in a blink. That's because coming to work at Great Hollow every day is truly a privilege and a joy as I and the rest of our dedicated staff continue trying to take this young organization to

new heights. There's no place else l'd rather be.

Over the past year, only the second full year since Great Hollow's founding, we watched the number of our program participants and supporters grow tremendously into an active and loyal community of people who are engaged in our mission of environmental education, science, and conservation. More familiar faces are added to the Great Hollow family every day. As you'll read, it was



an especially big year for our kids' education programs and community events, with attendance topping 1,500 and nearly doubling that of 2017. It was also a highly productive year for our scientific research program. We completed or continued working on seven different projects that are each providing some of the first information of their kind on the effects of environmental stressors, such as invasive plants and pollution, on Connecticut's wildlife. I'm proud to see our research resulting in publications in respected, peer-reviewed journals, which is always an important benchmark of success in any branch of science. I also take great pride in our mentorship and inclusion of young, aspiring biologists in our research so they can gain valuable hands-on experience that will help prepare them to be the conservation scientists of tomorrow. We had our largest ever crew of student research assistants in 2018 and expect them all to go on to do great things.

It's not for long that I can look back on our achievements in 2018 before thinking about all that we can and will do in 2019. We will continue to grow the size and reach of Great Hollow, and further establish the organization as a leader in environmental research and education in Connecticut and beyond. We will continue to sew our place into the fabric and character of our surrounding towns and communities, and provide a welcoming place in which families can experience the great outdoors. Our goals and accomplishments always start and end with people—you, your family, your friends. Thank you for helping make 2018 such a success.

Char

Chad Seewagen Executive Director



Biological research is at the core of what we do at Great Hollow. Our researchers and collaborators conduct conservation-driven studies of biodiversity in Connecticut and beyond to better understand human impacts to the environment and provide science that can help guide management decisions and public policy. We specialize in integrating the fields of animal ecology, physiology, and toxicology to investigate the effects of introduced species, land use change, and pollution on wildlife and habitats. It was a very busy and productive year for our research program, with new or continued projects that involved everything from plants and bugs to birds and bats.

Over the spring and summer, we completed the field work for our multi-year studies of the effects of the non-native invasive plant, Japanese barberry, on invertebrate diversity and habitat quality for forest-breeding songbirds. Japanese barberry was first introduced to North America from Asia in the late 1800s as an ornamental plant and has since become one of the most invasive non-native plants in the Northeast, particularly in Connecticut. Despite its rampant proliferation and dominance of many of our forests, almost nothing is known about its effects on wildlife. Combating Japanese barberry on a large scale is extremely labor-intensive and costly, so the effects of this invasive species on native wildlife need to be better understood before land managers and conservation practitioners allocate their limited resources to its eradication.

What we have found so far is that many more species of invertebrates live on and around native woody plants than on and around Japanese barberry. Our results show that Japanese barberry dramatically alters the composition of invertebrate communities both in the forest understory and on the ground, resulting in a sig-

Great Hollow field assistant, Nick Russo, measures the wing length of a veery

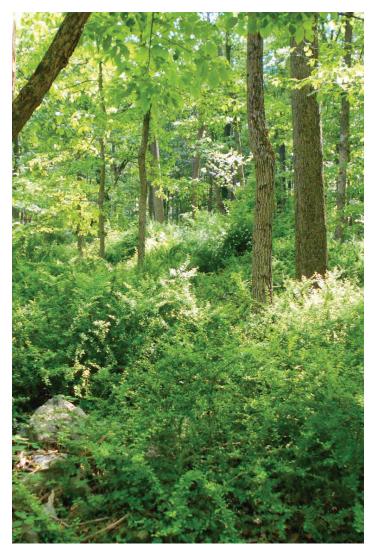


nificant reduction in species richness and diversity. Ants appear to be the hardest hit, as we found the numbers of ants on the forest floor to be five times lower around Japanese barberry than native plants, and ten times lower on the Japanese barberry itself than on native shrubs. Oddly enough, however, the overall abundance and total "biomass" of invertebrates does not appear to be reduced by Japanese barberry, which is good news if you are an animal that unselectively feeds on insects and other invertebrates. In other words, Japanese barberry might not reduce food abundance for the predators of invertebrates, as long as they aren't specialized to feed only on certain groups, like ants, that are disproportionately impacted.

To more directly investigate whether Japanese barberry's effects on invertebrates might in turn affect their predators, like songbirds, we are comparing the health and

> "We specialize in integrating the fields of animal ecology, physiology, and toxicology to investigate the effects of introduced species, land use change, and pollution on wildlife and its habitat."

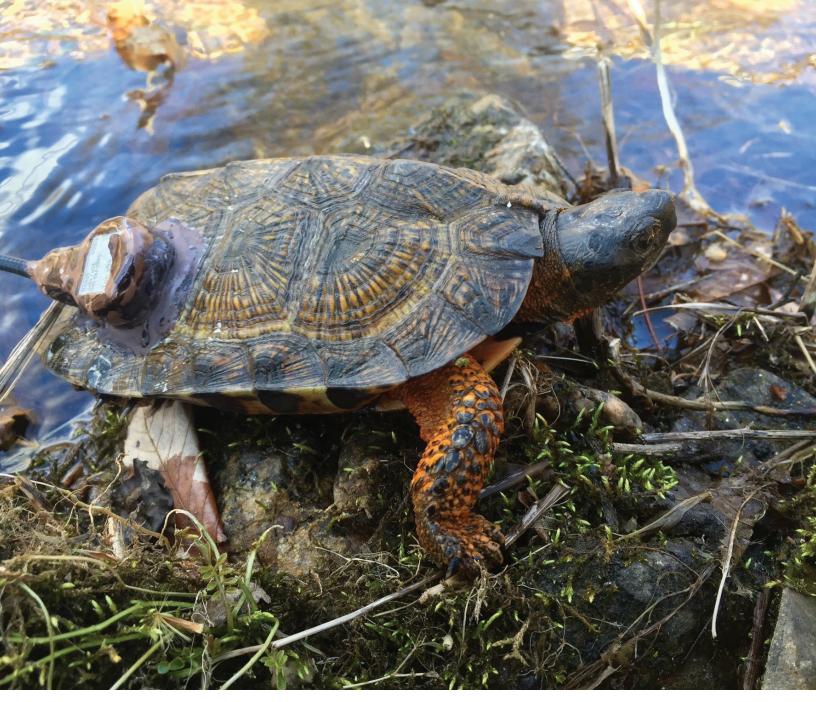
physiological condition of ovenbirds nesting in areas that are heavily invaded by Japanese barberry to those whose nesting territories are composed of mostly native vegetation. This is done by measuring a suite of parameters in



A forest understory overtaken by Japanese barberry. Great Hollow scientists are studying the impacts that this invasive plant has on invertebrate communities and forest songbirds.

### **Research Projects in Progress**

- > Impacts of light pollution on bat foraging activity
- Home ranges and movement patterns of a declining population of wood turtles in western Connecticut and adjacent New York
- Stopover behaviors and flight orientations of migrating yellow-rumped warblers exposed to mercury
- > Effects of mercury exposure on the migration speed and success of ovenbirds
- Effects of mercury on the energy metabolism of a model songbird, the zebra finch, and the implications for long-distance migration
- Prevalence of the Lyme disease-causing bacterium Borrelia burgdorferi among ticks at Great Hollow Nature Preserve



A Radio-tagged wood turtle being tracked as part of Great Hollow's study of wood turtle home-range sizes and movement patterns in Connecticut and New York

the birds' blood that are indicative of food intake and diet quality, as well as chronic stress levels and immune status. The full results of this study will not be available for a few more months but so far appear to indicate that the ovenbirds living amongst dense clusters of Japanese barberry are no worse for wear, at least in terms of their health and ability to find food. How their nesting success might be affected by Japanese barberry is another question, however, and an important subject for future investigation.

We have several other research projects in progress (see previous page) and certainly can't do all of this work alone. Luckily we have many great collaborators from institutions that include the American Museum of Natural "We take a highly collaborative approach to research, pooling and leveraging the skills and resources of multiple partners to most effectively and efficiently conduct scientific studies that are of common interest." History, Rochester Institute of Technology, Washington State University, Texas A&M University, University of Massachusetts, and University of Western Ontario. In addition to these projects that are led by Great Hollow, our staff also frequently collects data for or otherwise supports projects that are led by researchers at other institutions. Such projects to which Great Hollow is currently contributing include:

- Black Bear Distribution in the Lower Hudson Valley (Lead institution: Mianus River Gorge Preserve)
- Black-legged Tick Population Monitoring in Western Connecticut (Lead institution: Western Connecticut State University)
- Connecticut Bird Atlas Project (Lead institutions: University of Connecticut and Connecticut Department of Energy & Environmental Protection)
- Bobcat Occupancy and Diet in Connectcut (Lead institution: University of Connecticut)
- Biotic Integrity and Species Composition of the Freshwater Fish Community in Great Hollow's Quaker Brook (Lead institution: University of Connecticut)

This year, Great Hollow's executive director, Dr. Chad Seewagen, joined the faculty of the University of Connecticut's Department of Natural Resources and the Environment as an adjunct research scientist, which will foster additional collaborations between Great Hollow and Connecticut's largest university and help Great Hollow further establish itself as a key partner in biological research and conservation in the state. We take a highly collaborative approach to research, pooling and leveraging the skills and resources of multiple partners to most effectively and efficiently conduct scientific studies that are of common interest. We look forward to continuing to work with our partners in academia, government, and non-governmental organizations as we complete our ongoing projects and begin new ones in the coming year.

> An ovenbird hard at work, collecting food for itself and its nestlings





CONNECTICUT BIRD ATLAS

Great Hollow is a major sponsor of the long-awaited Connecticut Bird Atlas project that was launched this year by the University of Connecticut and Connecticut Department of Energy and Environmental Protection. The last Bird Atlas project in our state was conducted way back in the 1980s and much has undoubtedly changed since then.

The new and improved Bird Atlas that was started this year will provide much-needed, updated information on the distribution of birds throughout Connecticut during the breeding season, winter, and migration periods. Once completed, the results of this statewide, 5-year initiative will be publicly available on an interactive website and of myriad uses to government agencies, conservation organizations, environmental consultants, and other stakeholders throughout Connecticut who are involved in the conservation of our natural resources. It's hard to protect species of conservation concern if you don't know where they are! As Great Hollow's contribution to this important effort, we are employing and providing housing to one of the seven professional field technicians who will survey assigned segments of the state all summer long, for the first two summers of the project. Great Hollow has also "adopted" the 9 square mile census block in which our preserve is located, which means that we are committed to conducting an assigned number of hours of bird surveys in that block each summer and winter for the duration of the project. Individuals can also adopt census blocks, and despite the work of hired field technicians, the success of the Bird Atlas project largely

A green heron stalking fish in Great Hollow's wetlands

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depends on the volunteer support of the birding community. There are a whopping 601 census blocks in the state that need to be covered, so if you like birds and are interested in helping to conduct surveys for the project, please visit ctbirdatlas.org to learn how to volunteer. There is no minimum level of commitment required and you needn't be an experienced or expert birder to join. Beginner birders can easily contribute and are welcomed. So, grab a pair of binoculars and get out there!



"the success of the Bird Atlas Project largely depends on the volunteer support of the birding community"

### BIRD ATLAS PROJECT GOALS

Improve the understanding of breeding bird distribution and abundance in Connecticut

2

Document changes in breeding bird species distributions since the last atlas that was conducted in the 1980s



Determine the distribution of overwintering birds in the state



Identify important stopover habitats for migrating birds

5

Establish predictive relationships about where different species occur on the landscape

Learn more about volunteer opportunities at ctbirdatlas.org

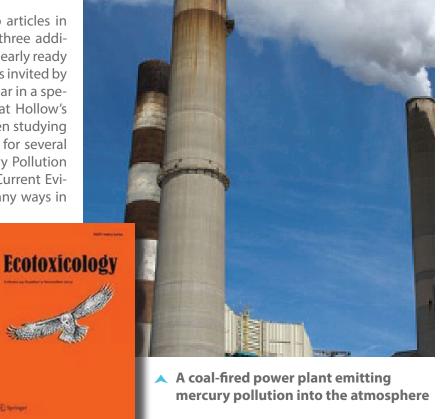


Great Hollow is proud to have published two articles in peer-reviewed science journals in 2018, with three additional articles either currently under review or nearly ready for submission. Our most recent publication was invited by the editors of the journal *Ecotoxicology* to appear in a special issue entitled "Mercury in Songbirds." Great Hollow's executive director, Dr. Chad Seewagen, has been studying the impact of mercury pollution on songbirds for several years. His article, "The Threat of Global Mercury Pollution to Bird Migration: Potential Mechanisms and Current Evidence," gives a sobering assessment of the many ways in

which mercury pollution from coal combustion and other human activities threatens to interfere with the ability of birds to successfully migrate, including their ability to navigate, sustain flight for long periods, rapidly refuel during stopovers, and avoid sickness and oxidative stress. The effects of mercury pollution on wildlife is a focal area of our conservation science program at Great Hollow and we have three such studies in progress. Research on mercury's impacts to wildlife has been a significant impetus and source of support for improved mercury emissions regulations around the world, including the

Minamata Convention — the first global treaty specifically intended to curb pollution from a heavy metal. We are proud to be among the growing body of biologists who are sounding the alarm about the potentially devastating consequences of this pollutant on wildlife (and people) around the world.

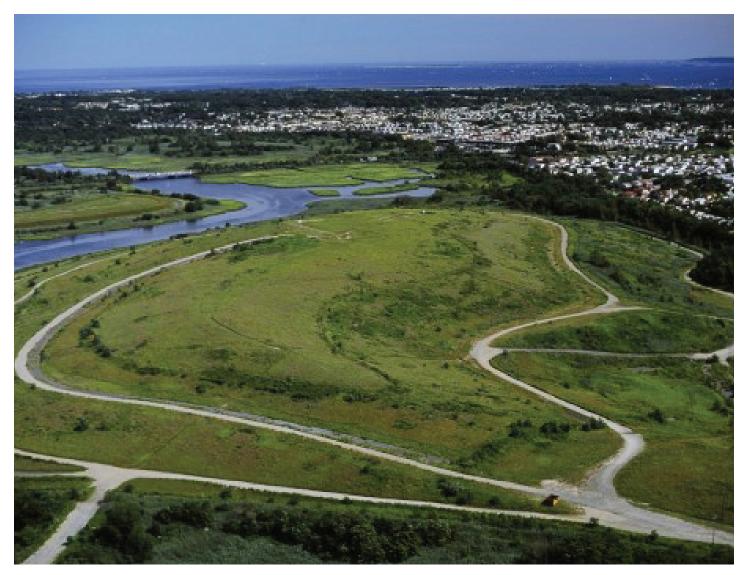
Our other article published this year was on our study of the value of revegetated landfills as habitat for grassland and shrubland songbirds. For many years, restored or naturally revegetated ("reclaimed") landfills have been advocated as a potential source of habitat for grassland, shrubland, and early successional forest wildlife, particularly in urban and industrial areas where large open spaces are often extremely limited. However, the ability of reclaimed landfills to support productive and diverse communities of birds or other wildlife has yet to be well-studied. At the time of our research, there had been no research on the use of reclaimed landfills by migrating birds and it



was unknown whether they could actually provide birds with suitable stopover habitat in which to rest and refuel during their long, arduous journeys.

Our objective was to estimate the "refueling rates" and stopover durations of migrating songbirds at a recently closed landfill in order to gauge the guality of the site as stopover habitat. To do that, each spring and fall for three years, our collaborator from the New Jersey Meadowlands Commission, Michael Newhouse, captured migrating songbirds that had chosen the former Erie Landfill in the New Jersey Meadowlands as a spot to rest and refuel before continuing onwards to their southern wintering grounds or northern breeding grounds. Data on the birds' age, sex, body size, weight, and size of their fat stores were collected, and the birds were then promptly released. With these basic data, we were able to investigate how long the birds remained at the site, what energetic condition they were in, and whether or not they were able to refuel and gain weight during their stopover in this unnatural

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🔺 A reclaimed landfill that now provides surrogate habitat for grassland and shrubland wildlife

habitat. We found that the recently reclaimed landfill was being used by an incredible abundance of grassland and shrubland songbirds, such as indigo buntings, savannah sparrows, and palm warblers in this heavily urbanized and industrialized area of New Jersey where alternative stopover habitat for these species is extremely limited. Many birds stayed there for multiple days, which suggests that the site was meeting their resource requirements. Their changes in body mass indicated that most birds were using the site for rest, energy maintenance, and predator avoidance more so than rapid and substantial fuel deposition. However, those that did gain weight during their stay did so at rates that were comparable to or higher than what is in the literature for those same species stopping over in more natural grassland and shrubland habitats in non-urban areas of North America. We concluded that former landfills, mining fields, and other such areas that have been reclaimed following human disturbances can provide an important alternative source of habitat for rest and energy maintenance for grassland and shrubland

birds during migration as their natural habitats continue to be lost. This and our other article to come out of this research (published in 2017) are the first to address the use of former landfills as stopover habitat by migratory birds, and are published in *Northeastern Naturalist* and the *Wilson Journal of Ornithology*.

Additional publications from Great Hollow in 2018 include chapters on "Aquatic Resources" and "Wildlife and Critical Habitats" in the Town of Sherman's Natural Resources Inventory Report and Recommendations. The report provides a comprehensive and current assessment of the status of natural resources in Sherman, which can be used to inform zoning and development decisions that will minimize impacts to the Town's surface waters, soils, farmland, wildlife, open spaces, and recreational resources.

Please visit the Research page on our website to download and read these or any of Great Hollow's other publications.



## SEASONAL RESEARCH STAFF

Great Hollow had a stellar crew of seasonal research assistants and interns this year, without whom many of our accomplishments wouldn't have been possible. We received nearly 100 applications from all over the country for our competitive summer internship program, from which we selected two bright and talented aspiring biologists-Evalyn Machia and Clare Quinlan. Evalyn, who is interested in mammal ecology and behavior, came to us from right here in Connecticut while Clare came to us from Pennsylvania with an interest in ornithology. Evalyn is now in her senior year at the University of Maine, majoring in Zoology, and Clare is finishing up a Masters in Environmental Science from Miami University in Ohio. Our summer internship program provides a unique opportunity for college students and young professionals to get a wide range of hands-on experience in field biology that will further prepare them to pursue careers in environmental conservation. Evalyn and Clare got to work closely with field crew leader, Eric Slayton as they helped to capture birds and

survey vegetation and invertebrates for our study of the effects of Japanese barberry on nesting habitat quality for ovenbirds. Eric is a long-time collaborator of Great Hollow's executive director, Chad Seewagen and has many years of experience leading field studies of birds. Along with Evalyn and Clare, we also welcomed research assistants, Megan Hart, Nick Russo, Emilia Rebollo, and Andrew Rapp. Megan came to us having recently completed an M.S. in Biology from Austin Peay State University in Tennessee and was hired to work full-time on the Connecticut Bird Atlas Project. Nick had recently graduated from UConn and joined Great Hollow for the summer to assist with our study of the effects of mercury pollution on ovenbird migration. He is now a Ph.D. student at UCLA where he will be studying seed dispersal and the use of cocoa plantations by birds in Africa for his dissertation research. Emilia visited us all the way from Argentina where she is a Ph.D. Candidate and working with the Smithsonian's Migratory Bird Center to study the breeding biology of vermilion flycatchers. She also assisted with our ovenbird research during her time at Great Hollow. And rew is an undergraduate at the College of William & Mary with a burgeoning interest in avian biology. He spent a month at Great Hollow gaining his first experience conducting field research on birds by shadowing Nick and Emilia, and also helped compile a species list of butterflies and dragonflies that inhabit our preserve. An avid birder, Andrew also spent countless hours wandering Great Hollow and its surrounding environs to collect data for the Connecticut Bird Atlas Project. We wish them all great success in their future academic and professional endeavors!





Great Hollow is pleased to be serving as a "community partner" for the University of Connecticut's terrific Conservation Ambassador Program, in which high school students learn about conservation science and receive mentorship from the university's professors and graduate students while partnering with an organization in their community to conduct a conservation project. We've been lucky to work with two exceptional teens through the program this year —New Fairfield High School student, Lucie Tuthill and Brookfield High School student, Luke Shanahan.

Along with UConn professor, Dr. Jason Vokoun and Ph.D. student, Megan Upp, Lucie is studying the biotic integrity and species composition of the community of fish in Great Hollow's Quaker Brook and its tributaries. Lucie's project will help inventory and determine the density of all of the fish species living in the stream, and also provide information on age class distribution, which is indicative of population health. Quaker Brook is one of a

#### Brook trout about to be measured and then released back into Quaker Brook.



#### < 2018 Seasonal Staff

Evalyn Machia | Research Intern
Emilia Rebollo | Research Assistant
Clare Quinlan | Research Intern
Andrew Rapp | Research Assistant
Nicholas Russo | Research Assistant
Megan Hart (Not pictured) | Field Technician



 Bobcat captured by one of Luke's motion-triggered trail cameras at Great Hollow

dwindling number of streams in Connecticut that is clean and healthy enough to support completely wild (i.e., not hatchery-raised and stocked) brook trout. Learning more about the brook trout population in Quaker Brook will help us to monitor its status and hopefully ensure its persistence into the future.

For his Conservation Ambassador Program project, Luke is working with UConn professor, Dr. Tracy Rittenhouse and master's student, Kristen Beattie to study the diet of bobcats and the species composition of their prey base at Great Hollow. In recent decades, bobcats have rapidly acclimated to moderate levels of development and moved into suburban areas where they once were extremely rare. Luke's project is part of a larger effort by Dr. Rittenhouse to learn more about the ecology and behavior of bobcats in these human-dominated landscapes of Connecticut. By attracting bobcats with scented lures to rub against "hair snares" that he set up throughout Great Hollow and nearby study sites, Luke and his mentors can obtain fur samples that hold many secrets about the bobcats' diet. By comparing isotopic signatures in the bobcat fur to the fur of various smaller mammals also sampled at Great Hollow, the team can find out what critters bobcats are primarily preying upon. In the process, Luke is also providing Great Hollow with the first inventory of the species of small mammals, like shrews, moles, voles, weasels, and mice that inhabit the nature preserve. We thank Lucie and Luke for all of their great work this year!



It was a banner year for our kids' environmental education programs, which continue to rapidly grow in popularity and attendance. Great Hollow provides children from surrounding communities with unique opportunities to get their feet wet and hands dirty as they explore the natural world around them and learn all about the ecology of the plants, animals, and ecosystems in our region from our professional staff. It is through these experiences that we hope to foster deeper connections with nature and inspire future generations of environmental scientists, educators, and conservationists.

We developed and released our first catalog of environmental education programs that we can offer to schools and other visiting youth groups. The comprehensive catalog is aligned with state and national science standards, and covers everything from forest ecology, animal adaptations, and predator-prey dynamics, to vernal pools, stream ecology, the life of plants, the world of birds, and so much more. Many of these topics are also covered in our School Break Adventures, Kids' Nature Night, and Homeschool series that are loved by kids and parents alike. These drop-off programs provide kids with fun-filled, active days or evenings of learning like no other in our area. More than 500 youth participated in our education programs in 2018 and we are always happy to see the familiar faces of the many children who have become Great Hollow regulars!

This year we were excited to create and unveil our awesome new teaching space in one of Great Hollow's historic barns. Now known as the Education Barn, this fun and engaging learning environment is the new hub for all of our kids' environmental education programs and Eco-Discovery Camp. Along with the basic stuff of a traditional classroom, the Education Barn has lots of cool things that kids aren't so likely to find at school, such as animal bones, pelts, feathers, bird nests, and nature art. It also has a library of field guides and children's books on science, animals, and nature that were generously donated to us by Scholastic Inc. that children are welcome to read or take home with them any time. Feel free to pop in whenever you see it open!

#### School field trip getting up close and personal with some of our favorite education animals



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## ECO-DISCOVERY CAMP

The second year of our Eco-Discovery Camp was a rousing success, thanks to our amazing Education Coordinator and Camp Director, Sena Rasun-Mahendra. Widely beloved (some might say idolized) by all of the kids who come to Great Hollow, Sena really kicks things into high gear in the summer to provide a one-of-a-kind day camp experience that kids will never forget. Along with camp instructor, Anika Lindsay, counselors in training, Kylie Ward and Autumn Owen, and intrepid volunteer, June Falk, Sena led nine jam-packed weekly sessions of camp that had awesome themes like Child vs. Wild, Ecosystem Explorations, and Senses and Defenses. Our campers are usually having too much fun to realize that they are learning all about such things as the water cycle, food webs, pollination, animal adaptations, and invasive species, to name only a small part of the life-science curriculum around which our camp revolves. We look forward to continuing to build our camp into an even bigger and better experience for kids in the summers to come.

Campers explore Great Hollow's streams for
 fish and wildlife





We held 30 community events in 2018 that were attended by a total of nearly 1,000 people. Largely planned and coordinated by our naturalist and steward, John Foley, these events are meant to give families an opportunity to get outside and have fun while maybe learning a few new things along the way. John's guided hikes are always extremely popular and well-attended, and are offered all year long. No matter if it's a tree identification walk in the dead of winter or a moonlit owl prowl in the dark woods, we are always amazed and impressed by the huge turnout. In addition to our usual guided hikes around Great Hollow, this year we introduced many people to some of the other beautiful preserves that we are fortunate to have in our area, such as Dover Stone Church and the Roger Perry Preserve. We also staked out woodcocks engaging in their amazing aerial mating displays at Cranberry Mountain, trekked up Towner Hill to see vernal pools and their resident spotted salamanders and wood frogs, and took in the spectacle and colors of spring bird migration around

Great Hollow.

Other events this year ran the gamut from bird banding demonstrations and science seminars to an outdoor jazz show and our annual fall family fun day, known as Hollow Fest. We hosted five guest lectures by experts on a wide range of topics that included ticks and Lyme disease, cheetah conservation in Africa, black bear natural history and population trends in New York and Connecticut, the frogs of Connecticut, and how to landscape your property to be wildlife friendly. Hosting these engaging and interactive presentations is a great way for us to help our partners in environmental science and conservation communicate with and educate the public. We brought Jazz Night on the Patio back by popular demand and once again enjoyed the wonderful company of our neighbors and supporters over some wine and great music alongside a roaring fire. It looks like this is going to have to be annual tradition! There was a great turnout for World Turtle Day despite several postponements due to the May 15th storm that devastated so much of our community. Where else around here can you see and touch dozens of species of turtles and tortoises from all over the world while learning about their natural history, behavior, and conservation? You could say that we have a real thing for turtles at Great Hollow, so you can definitely count on seeing more World Turtle Day celebrations and other turtle-themed events in the future. We thank all of you who came down to participate in our events this year and we hope to see you at the many more great events that will come in 2019.



Great Hollow's naturalist, John Foley, getting ready to lead an educational walk about invasive plants

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Visitors enjoy the paintings and photographs in Great Hollow's first juried art show



ducing Great Hollow's first fundraising wall calendar.

On top of all that, we were fortunate to have accomplished painter and teacher, Sharon Nakazato, lead two plein air art days at Great Hollow this past summer that produced beautiful artistic representations of our nature preserve's forests, streams, wet meadows, and historic buildings. We look forward to continuing to incorporate the arts in what we do at Great Hollow and to hosting more events like these in the coming year.

Great Hollow supports and appreciates the representation and expression of nature in the visual arts. We do this by hosting art shows and technical workshops, and providing a forum through which nature art enthusiasts and artists from our local communities can come together.

Great Hollow held its first juried art show this year and it was a great success. Incredible paintings and photographs were contributed by artists from all over Connecticut and neighboring New York, and viewed at Great Hollow by more than 200 people. Hats off to volunteer, Linda Hubbard for putting together such a fantastic event. The Great Hollow Photographers Club was extremely active in 2018, organizing several outstanding photography workshops and presentations throughout the year, and proFirst place painting by Betty Ann Medeiros



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# BIRDS OF PREY

This year we built a facility for and were excited to acquire our first non-releasable birds of prey to use as animal ambassadors in our environmental education programs. We first adopted two male barred owls from a wildlife rehabilitator in New York State, followed by two female red-tailed hawks that came to us from a rehabilitator in Connecticut. Both owls have permanent wing injuries that prevent them from being able to fly well enough to survive in the wild. Their injuries are most likely the result of collisions with automobiles. One of the hawks also has a permanent wing injury from being hit by a car and the other has irreversible neurological damage from a past viral infection. These birds have a great home at Great Hollow and are sure to be a big hit with our visitors and program participants. They are on display outdoors year-round and the public is welcome to come visit them any time. We will soon be adopting three eastern screech owls from a local rehabilitator, so be sure to come check out those adorable, tiny birds when they arrive!

# Become a part of our community

Pledge your support for Great Hollow by becoming a member or making a tax-deductible donation at greathollow.org today.



visit 225 Route 37 • New Fairfield • CT • 06812

call (203) 546-7789

email info@greathollow.org

discover greathollow.org

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# ACKNOWLEDGEMENTS

We are grateful to the many members, donors, program participants, and volunteers whose support was paramount to our accomplishments and success in 2018. We hope you will continue your involvement in our organization in the coming year to help keep Great Hollow going strong. There is no Great Hollow without you.

Friends and neighbors who volunteered their valuable time and services to Great Hollow this year include Greg Baird, George Buck, Dod Chahroudi, Angela Dimmitt, June Falk, Friends of the Great Swamp, Justin and Kelly Goodhart, Justin Gomez, Linda Gould, Dr. David Gropper, Linda Hubbard, Naromi Land Trust, John and Masumi O'Donnell, Autumn Owen, Helder and Dorothy Prata, Andrew Rapp, Emilia Rebollo, Eric Slayton, and Kylie Ward.

Generous donations to Great Hollow were made by the Goldring Family Foundation, Ada Howe Kent Foundation, Stacy Allen, Mary Ann Cahill, June Falk, Laura Kaplan, Laurie Lewis, Amy McIntosh and Jeffrey Toobin, Dorothy Prata, Suzanne Telsey, and Julie Toscano.

The following local businesses kindly donated prizes to the winners of Great Hollow's juried art show: Visual Impact

print shop, Bank Street Theater, Pappadella's, Zaragoza Restaurant, Lucia Ristorante, Claire's Garden Center, Locust Glenn, the Barn Gallery, Fairwood Wines, Safari Collective, and the Sherman IGA.

Great Hollow is honored to have received research grants this year from the American Wildlife Conservation Foundation and the Connecticut Ornithological Society for our ongoing studies of bats and migratory birds.

Scout Troop 137 of New Fairfield completed amazing service projects at Great Hollow this year that were led by Sean Crisci, Mathew Grauert, Kenny Hesselbacher, Alex Reilly, Sam Riggs, and Zach Taylor, and included new bridges along our Red and Purple Trails, a new boardwalk on our Green Trail, a raised garden bed at the visitor's parking area entrance, a paver-stone walkway leading from the driveway to the Lecture Room entrance, three nest boxes for owls, a donation box in front of the birds of prey enclosures, and a new picnic table for the Merritt House lawn. In addition, Girl Scouts, Phoebe Opdahl, Sarah Madore, and Katie Williams from Troop 50578 constructed a handy first aid station along our Red Trail to help keep our hikers safe. Thank you, Scouts for your outstanding work and craftsmanship!

## Special thanks to our members

#### Merritt Club | \$5000+

Gary Goldring Henry and Sabine Renard Amy McIntosh and Jeffrey Toobin

#### Family Level | \$200

Robert Walther Deanna Charriere Fleur Fairman Marianne Trombetta Adam Furphy Whitney Will Winsome Jeffries Tara O'Brien

#### Individual Level | \$50

Peter Rostenberg Susan Manning John O'Donnell Masumi O'Donnel Becky Hrdy Suzanne Telsey David Gropper Christina McCartney Susan Seeger Paul Lewis Jeffrey Kilberg Justin Goodhart Alice Rodman Michael Grover Cynthia O'Connor Maryjane Magoon Sharon Nakazato Susan Andres Christine Sheppard Cliff Photos Margery Josephson

#### Photographers Club | \$20

John O'Donnell Justin Goodhart Kelly Goodhart Linda Hubbard Maurice Zetana Tim Clark Jeff Ginsburg Neil Zobler



Established in 2016, Great Hollow is a non-profit organization that is dedicated to biodiversity conservation, applied ecological research, experiential environmental education, and passive outdoor recreation in Connecticut and beyond.

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